

# Cumberland County Working Lands Protection Plan

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# Executive Summary

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## **Introduction**

Farms and forests cover over half of Cumberland County and serve as multi-dimensional land uses that provide economic, ecological and social benefits to the community at large. There are 231,526 acres of agricultural land in the county. The agricultural industry – which includes farming, forestry, and the manufacturing and selling of food, fiber and wood products – contributes more than \$540 million to Cumberland County’s economy each year. Agricultural and forested lands also are net contributors to the county’s budget, generating more value in property taxes than in the cost of services they receive. Forests and agricultural lands collect and filter storm water, sequester carbon and support wildlife. Furthermore, agriculture defines the rural character of the county, enhancing open space and scenic beauty, and maintaining connections between people and their food.

## **Need for Action**

Agriculture remains a viable industry in Cumberland County. The population of the county increased 15 percent from 1990 to 2008, adding more than 42,000 residents. With the BRAC expansion of Fort Bragg, the population is projected to increase by 40,000 in the next four years. Growth and development are not the only challenges to family farms. Profitability, an aging farmer population and other issues threaten to trigger a mass conversion of farms and the loss of their products in the next 20 years.

## **Purpose of this Plan**

The purpose of this plan is to provide an assessment of the agricultural industry in Cumberland County, identify its challenges and opportunities, and develop a set of strategies and actions that will protect the county’s working lands and promote the agricultural economy. The strategies of this plan are intended to encourage long-term policies that support agriculture and provide specific programs that promote agricultural economic development and land protection.

## **Findings**

The majority of farms in the county are categorized as small, family farms, generating up to \$250,000 in annual gross income. A large percentage of these family farms are operated as a primary occupation. Sixty-eight family farms in the county are categorized as large or very large operations, and 18 farms are owned by non-family corporations.

Agriculture faces numerous internal and external challenges that threaten the long-term viability of family farms. They are:

- Profitability/input costs
- Population growth
- Aging farmer population
- Loss of rental land
- Labor
- Apathy and negative attitudes
- Lack of farm transition incentives
- Opportunities for the next generation of farmers

The county has a Farm Advisory Board and, along with state and federal partners, provides programs to farmers that help with taxes, education, business planning and conservation. These partners and programs include:

- Present-Use Value Taxation
- Voluntary Agricultural Districts
- Conservation Incentives Program (limited to within 1 mile of Fort Bragg)
- N.C. Cooperative Extension
- Soil & Water Conservation District
- N.C. Forest Service
- USDA – Farm Service Agency and Natural Resource Conservation Service
- N. C. Farm Bureau

There are additional land protection programs available including Enhanced Voluntary Agricultural Districts and conservation easements. Counties in other states have developed numerous zoning strategies to protect farmland, some that could be applied in Cumberland County.

Many within the agricultural industry believe that economic development is the best way to protect farmland. Make farming profitable, they say, and people will want to farm. Two major areas of economic development that could be exploited are:

- Agricultural biotechnology and energy biomass
- Local food, landscape and lumber markets

## **Recommendations**

- Promote the expansion and diversification of the agricultural industry.
- Manage growth and protect agricultural lands.

- Increase the agricultural community's participation in government.
- Promote widespread support for agriculture.

Each recommendation includes a set of strategies that have specific action steps.

Implementation of the plan will involve the leadership of the Farm Advisory Board, support from the Board of Commissioners, and the cooperation and participation of local governments, institutions, the agricultural community and Cumberland County residents. The agricultural protection program this plan establishes will be ongoing and should be reviewed annually and updated every five years.

# Acknowledgements

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The N.C. Agricultural Development and Farmland Preservation Trust Fund, Fort Bragg BRAC Regional Task Force and The Lois G. Britt Agribusiness Center at Mount Olive College provided support for this plan.

While Farm Bureau was not originally a component of the planning for this document it was felt that the Cumberland County Farm Bureau as a representative of the farmers in the county as well as a supporter of the military and their need to train should have input as to the final product presented to the Board of Commissioners. The following statement typifies and represents the sentiments of the Cumberland County Farm Bureau with regard to farmland and its current and future uses:

*"The Farm Bureau recognizes the importance of military's readiness; however, the defense of this country should be borne by all. Those living and owning land in the county near the base should not have undue burden of that expense. The Farm Bureau believes restrictions on land use without compensation to the landowners is an undue burden for those living near the base."*

The intent of this plan is neither to limit nor restrict landowners' rights and uses. The plan is intended to serve as a guide for actions to provide landowners and residents an increased awareness of farmland preservation opportunities and agricultural awareness. Agriculture is important to the county and its economy and to the well-being of family farms. However, the ultimate decision of farmland preservation rests in the hands of the owners of farms and forests.

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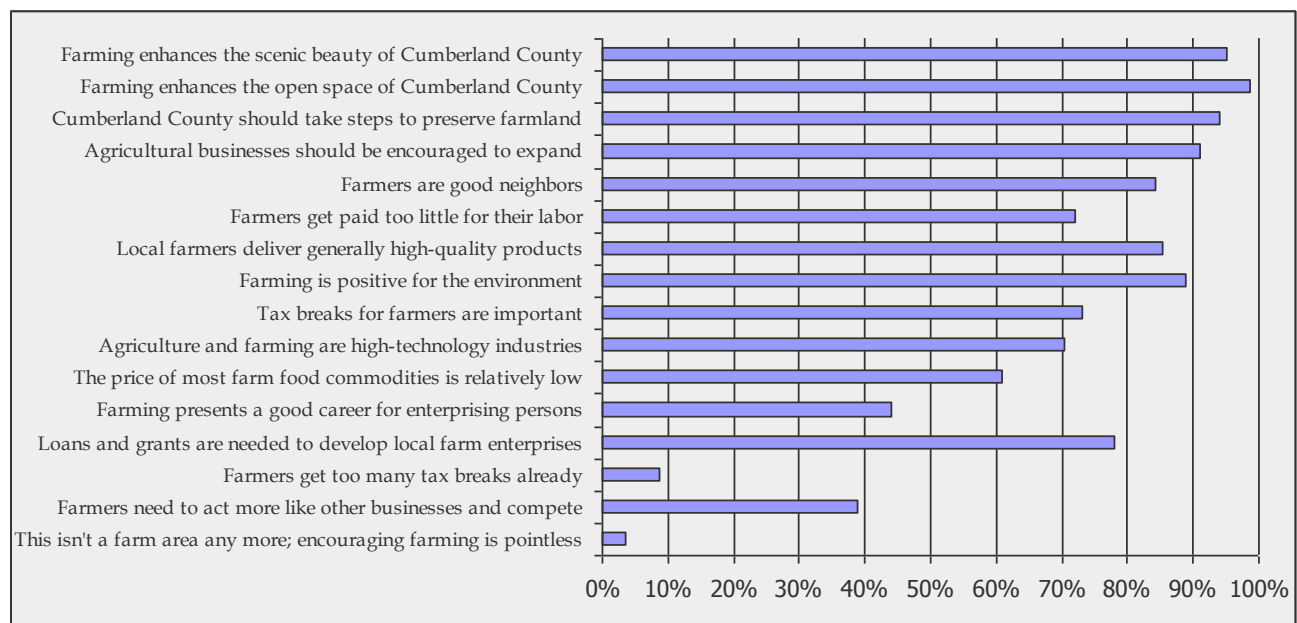
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# Introduction

Agriculture is a multi-dimensional land use that provides economic, ecological and social benefits to residents throughout Cumberland County. Farms and forests cover more than half of the land in the county making agriculture the largest land use. Cumberland County has been growing for decades and will continue to grow as Fort Bragg expands and military and civilian personnel move to the area as part of the Base Realignment and Closure (BRAC) process. It is anticipated that 40,000 people will move into the region by 2013 with most of them living near and working at Ft. Bragg, Pope Air Force Base, and Camp Mackall. It is inevitable that some farms and forests will be developed to accommodate this growth. Nevertheless, retaining significant agricultural land is essential to the well being of the county's residents.

Producers and non-farming residents from around the county were surveyed for this plan by the Ft. Bragg BRAC Regional Task Force and Mount Olive College. Producers provided insights to the challenges of farming and the need for continued and expanded support from local government and residents. The residents, in turn, provided valuable input about their views on farming and their support for government intervention (see Figure 1). Protecting small, family farms while embracing growth will be challenging and will require the participation and cooperation of local governments, institutions, businesses, residents and land owners.



**Figure 1. Cumberland County Non-Farm Residents Survey: Views on Agriculture**

## The Importance of Agriculture

The agricultural industry includes manufacturers and processors in addition to the farms and forests that grow the raw food, fiber and forest products. In 2006, the industry contributed more than \$540 million in total income to the county.<sup>1</sup> The industry provides meaningful entrepreneurial and wage opportunities for many rural residents who in turn support local businesses.

Agricultural lands require few public services like law enforcement, schools and health clinics. As a consequence, the *ad valorem* property taxes that counties assess on agricultural lands generally exceed the costs of providing the lands public services by an average national ratio of \$1.00 to \$0.37. Residential land use, conversely, demands more services from a county than it pays in taxes with a national average revenue to expenditure ratio of \$1.00 to \$1.19.<sup>2</sup>

Farmland and forestland provide many ecological benefits to the public, such as storm water retention and filtration, carbon sequestration, air purification and wildlife habitat. Nearly 90 percent of non-farm residents surveyed agree that farming is good for the environment. Agriculture does contribute to air and water pollution, but producers continue to reduce their environmental impact by implementing best management practices (BMPs) to protect soil, water and air resources. Open spaces like farms and forest also moderate air temperatures in warmer months and can be five to 10 degrees cooler than nearby cities and towns.

Agriculture is also important to the general welfare of the community. Fields and pastures enhance open space and the scenic beauty of the county while barns and silos mark the heritage of farming communities. Forests provide relief from urban closeness and provide recreational opportunities.

## Agriculture and Fort Bragg

The importance of agriculture to the county may not be as obvious as is the importance of Fort Bragg. The base plays a major role in the identity of the county and Fayetteville, and is central to their economies. However, agriculture and Fort Bragg should not be viewed as opposing elements because agricultural lands are important to Fort Bragg. Urban and residential encroachment around the base affects the ability of the military to perform critical training exercises while farms and forests are compatible with the base's missions. More importantly, agricultural production and food safety are critical to our national security.

The Fort Bragg BRAC Regional Task Force (RTF) was established to help the counties surrounding Ft. Bragg deal with the anticipated growth from the BRAC process. One focus of

the BRAC RTF is working lands preservation as a tool to restrict developmental encroachment threatening the base and its training efforts. The Working Lands Protection program works with the eleven counties surrounding Ft. Bragg to create Working Lands Protection Plans (WLPP) specific to each county. The WLPPs outline the current state of agriculture and provide recommendations for each county to consider and implement to preserve farms and forest thus maintaining compatible uses around the base.

Agricultural lands are so important to the mission of Fort Bragg that the BRAC Regional Task Force developed a working lands protection strategy as part of their overall efforts to help Cumberland, Fayetteville and the other surrounding counties and municipalities prepare for the impact of base expansion.

A land use study<sup>3</sup> prepared for the Ft. Bragg Regional Land Use Advisory Committee (RULAC) addresses the compatibility of land uses within five miles of the Fort, conflicting land use pressures and the need to conserve agricultural lands. Among the findings of the report are the following:

One of the greatest challenges in developing an effective land use plan, regardless of the size of the area being studied, is the need to properly *balance* the demand of competing uses for the limited and fragile resource of land. (p. 28)

Within the Fort Bragg Region, this *balance* is even more challenging to achieve with the added dimensions of the BRAC related growth pressures .... In other words planners, developers, property owners, military leaders, and elected officials in the Fort Bragg region must seek to *balance* the need to protect the military training mission... to be successful. (p. 28)

As the real estate community often says, development pressure and property values are driven by three things – “location, location, and location.” In the case of this region, the most attractive location for much of the residential development is contained within the five-mile area surrounding the military bases. (p. 45)

Although otherwise attractive for various forms of urban development, there are certain portions of the five-mile study area that are unsuitable for both residential and commercial development – due to military and environmental factors. These issues include [...] prime farmlands, and managed forests. Failure to conserve these areas from urban development will compromise the military training mission... and threaten the health and safety of the human population residing there. (p. 46)

... it is becoming increasingly important to conserve both the working farms and forests in this area from urban development pressures. (p. 49)

The study goes on to identify 20,322 acres in the county that are within five miles of the base and are important to conserve or are working forests and farms. While the RULAC study focused on this mission-critical area, the need exists for the county to identify and provide incentives to conserve and protect the agricultural and forest lands of Cumberland County that are outside of this identified critical region.

## **The Threat to Agriculture**

Cumberland County lost 10,178 acres of farmland between 1992 and 2007 and 13,581 acres of private forestland between 1990 and 2006.<sup>4,5,6</sup> The BRAC expansion of Fort Bragg threatens to consume additional tracts of agricultural land as military personnel and private contractors relocate to the area. Because Cumberland County is the home of Fort Bragg and Fayetteville is the commercial hub of the region, it is likely that the county will experience a greater impact from the BRAC expansion than the surrounding counties.

In addition to the threat posed by population growth, farms are challenged by low profitability, high land costs and an aging farmer population. However, opportunities exist for agriculture, including local markets and the burgeoning field of agricultural biotechnology. Furthermore, although the impact of climate change, global population growth and rising oil prices are far from certain, any of these events may create a critical need for local food and fuel production or a lucrative opportunity to supply markets outside the county.

Farms are more likely to be viable if they have productive soils and are surrounded by other farms. Similarly, forests are more easily managed if surrounded by other forests. Once a farm or forest is developed – parceled out, topsoil removed, built on – it cannot feasibly be returned to agriculture. The irreversibility of development raises the need to protect agricultural land today.

## **The Need for Action**

Fort Bragg is an asset to Cumberland County, and the incoming servicemen and their families will be welcomed. But as their houses are built along with the shopping centers, schools and the infrastructure needed to support them, careful consideration needs to be made to protect family farms and forests. Growth should be directed away from productive soils, and concentrations of farms and forest should be left intact, not fragmented. The growth and progression of the county can be an opportunity for the hundreds of small, family farms to remain viable, but only if they are recognized and treated as valuable and desired assets of the community.

To ensure the long-term viability of family farms and the agricultural industry, producers, residents and officials will need to work together to implement the strategies of this plan. Producers will have to work cooperatively with each other, participate in community affairs, and be creative business operators to adapt to changing markets. Residents will have to support farms and forests by purchasing locally produced goods, adapting to the inconveniences of rural life and supporting county interventions. County officials need to support the economic development of the agricultural industry and carefully plan for growth to ensure minimal impact on agriculture. The strategies recommended in this plan carry opportunity costs for the financial and natural resources of the county, but they can be pursued at the same time the county grows and progresses into the 21st century.



# Purpose of Plan

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The purpose of this plan is to provide an assessment of the farming and forestry industries (henceforth referred together as the agricultural industry) in Cumberland County, identify their challenges and opportunities, and develop a set of strategies and actions that will protect the county's working lands and promote the agricultural economy. Although the industry as a whole is important to this effort, the plan is focused primarily on family-owned farms and forests. The strategies of this plan are intended to encourage long-term policies that support agriculture and provide specific programs that promote agricultural economic development and land protection. The plan has been written to satisfy the requirements of the N.C. Agricultural Development and Farmland Preservation Enabling Act (N.C.G.S §106-735 *et seq.*). The act gives preference in the distribution of monies from the N.C. Agricultural Development and Farmland Preservation Trust Fund to counties that have adopted a farmland protection plan. The act requires that a plan:

- Contain a list and description of existing agricultural activity in the county
- Contain a list of existing challenges to continued family farming in the county
- Contain a list of opportunities for maintaining or enhancing small, family-owned farms and the local agricultural economy
- Describe how the county plans to maintain a viable agricultural community and shall address farmland preservation tools, such as agricultural economic development, including farm diversification and marketing assistance; other kinds of agricultural technical assistance, such as farm infrastructure financing, farmland purchasing, linking with younger farmers and estate planning; the desirability and feasibility of donating agricultural conservation easements and entering into voluntary agricultural districts
- Contain a schedule for implementing the plan and an identification of possible funding sources for the long-term support of the plan

# Definitions

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**Agriculture** – all activities related to or incidental to the production of crops, fruits, vegetables, ornamental and flowering plants, dairy, livestock, poultry, equine, sod, trees, Christmas trees, timber, non-timber forest products, bees and aquaculture having a domestic or foreign market. Agriculture also includes secondary, on-farm activities such as value-added processing, marketing and agritourism. To provide more specific meaning at times, the plan also uses the terms *forest*, *forestland* and *forestry*; and *farm*, *farmland* and *farming*.

**Farmland** – land that is actively engaged in the commercial production or growing of crops, plants or animals. A *farm* is an individual economic entity. *Farming* is the act of operating a farm. Examples of farm products include soybeans, grains, tobacco, cotton, corn, cattle, tree fruits, vine fruits, berries, sod, shrubs, greenhouse plants, ornamental trees and Christmas trees.

**Forestland** – land that is actively engaged in the commercial growing of trees for timber. A *forest* refers to an individual tract under a single owner or manager. *Forestry* is the planting, management and harvesting of timber. This plan recognizes that there are non-timber products that are produced in forests – e.g. mushrooms, pine straw, biomass – and considers the activities related to their production as agriculture.

**Operators, producers and farmers** are used interchangeably and are the individuals engaged in forestry and farming.

# Agriculture in Cumberland County

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## Land in Farms

Farming, with a few exceptions, is land intensive. The land is the centerpiece of a farm from which all decisions are based. Farms use land to grow crops, graze livestock, and support buildings and equipment. In most cases, the land is also a farm's most valuable asset and is used to finance capital improvements like buildings and equipment or working capital for seed and livestock. Because most farms are family owned, the land is also the most valuable asset of the farm household and the one that can be used as collateral, or sold in whole or part in the event of a hardship like a major illness. Farmland provides many valuable benefits to the community, but it is also the foundation of farm operations and the families they support.

The fundamental component of land is the soil, but not all soils are created equal. Soil quality is an important factor in determining the success of a farm operation. Soil scientists at the Natural Resources Conservation Service identify the characteristics of soils that are most productive for growing crops. The importance of soil productivity is logical when you consider the fact that farming is an enterprise of production not unlike manufacturing. Given the choice between two tracts of land of equal size and the same material inputs, any rational person would choose the tract that yields 100 bushels of corn per acre over the tract that yields 50 bushels per acre.

Cumberland County has an abundance of soils classified as having the highest or a high capability for producing crops; the distribution of these soils is shown in Map 1. Unfortunately, a large concentration of the most capable soils is in (or under) the city of Fayetteville, but that is not uncommon because factors that lead to the creation and/or deposition of productive soils are often the same as those that make for good settlements. Fayetteville aside, there are still significant concentrations of productive soils in the county, most notably in the southwest and east areas and in the Cape Fear River floodplain.

Farmland represents 21 percent, or 88,353 acres, of all land in Cumberland County.<sup>5</sup> How the farmland is used depends on several factors, one being the quality of the soil and another being the farm's enterprise, which the producer decides based on personal and economic factors. The U.S. Department of Agriculture (USDA) categorizes the use of farmland as cropland, pasture, woodland and other uses.

Roughly half the farmland in the county is used to grow row crops, forage crops and horticultural crops (Figure 2). Row crops are commodity crops such as corn, soybeans, cotton, and tobacco. They require large areas to be profitable. Horticultural crops such as fruits,

vegetables and ornamentals, have relatively higher values and require more manual labor than row crops, but they can be profitable on smaller areas. Forage crops include grass, hay and corn grown for silage, which are used to feed livestock.

The evolution of the confined animal feeding operation (CAFO) has eliminated the need for large pastures at large-scale livestock operations. The 5,000 acres of pasture<sup>5</sup> in the county are used primarily for cattle and equine. In addition to using land for crops and pasture, farms in the county use about 5,000 acres for storage, processing and other ancillary activities.<sup>5</sup> Because not all soils are capable of profitably producing crops, about 38 percent of farmland in the county is wooded.<sup>5</sup> Wooded areas can be managed for timber to supplement the primary farm activities and or be used as pasture.

Map 2 shows the county's land cover as categorized by the U.S. Geological Survey, which doesn't correlate perfectly with the USDA categories, but is sufficient to illustrate the location of the cropland. Notice that the areas of cultivated cropland are nearly identical to the areas of productive soils shown in Map 1.

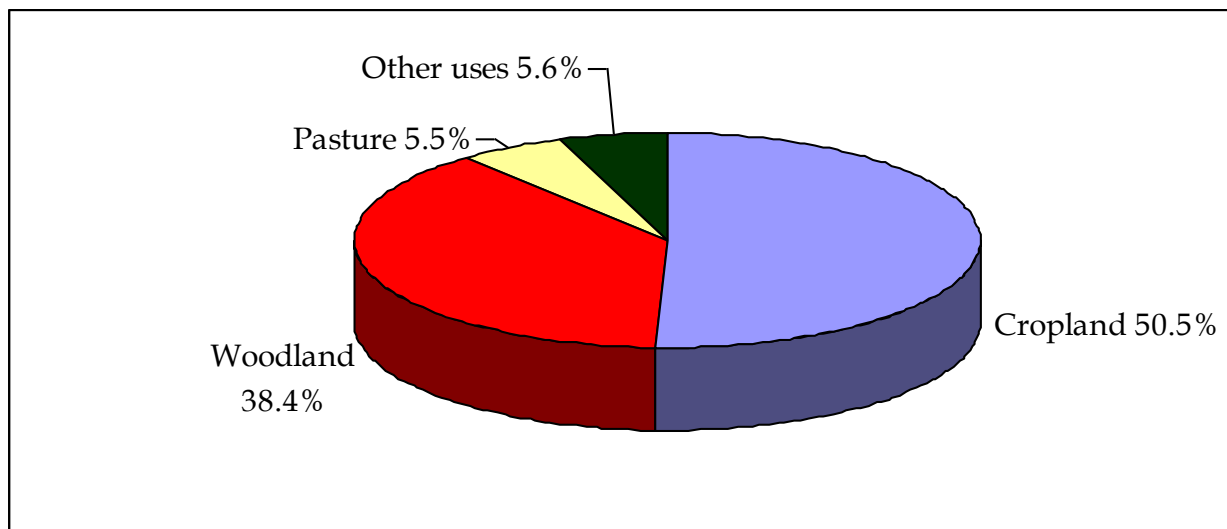
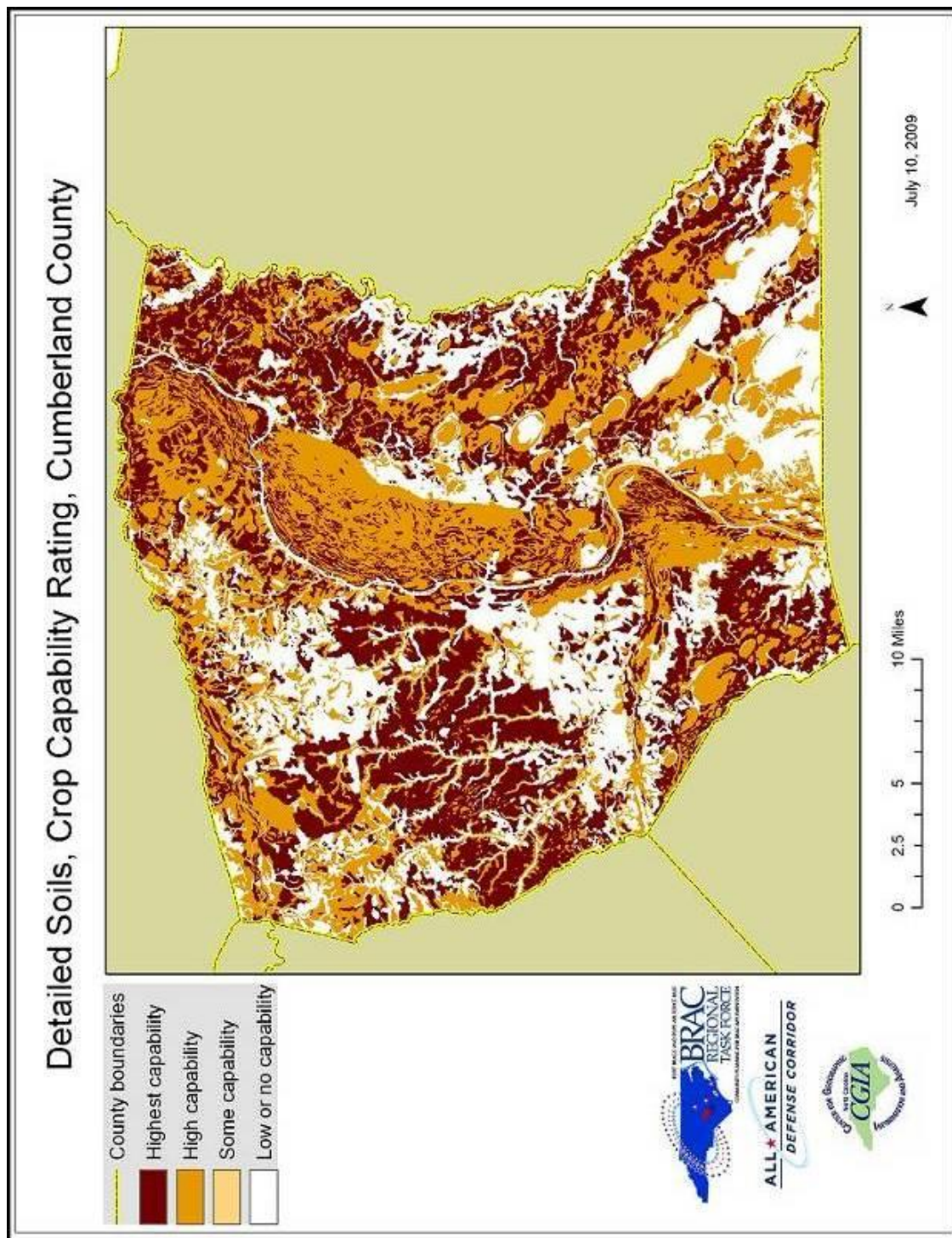
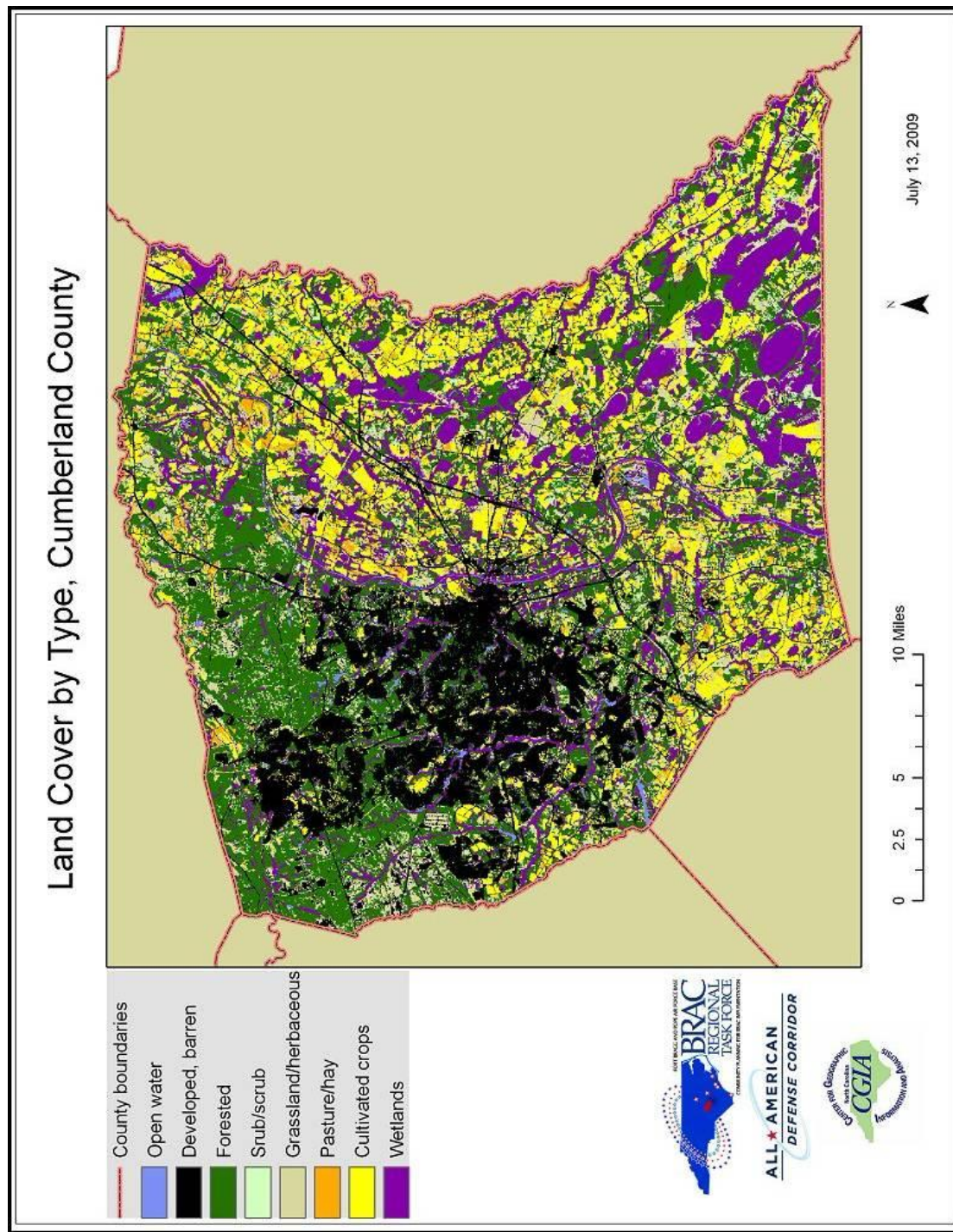


Figure 2. Land in Farms by Type of Land. Source: 2007 Census of Agriculture



Map 1. Soils Ranked and Classified by Crop Productivity





Map 2. Land Cover

## Overview of Farms

Cumberland County's farms are diverse. According to the 2007 Census of Agriculture, the county's 500 farms range from part-time farms to corporate farms. Farm income ranges from less than \$1,000 in sales income to over \$1 million. Farming is the primary occupation of 47 percent of the operators; the other 53 percent farm as a secondary or part-time enterprise. An overwhelming majority of farmers sell their products on the open markets while 50 farms produce commodities on contract. One characteristic that is shared by most of the farm population is family ownership. In all, 96 percent of farms are family owned, 86 percent are sole proprietorships and 10 percent are owned by family partnerships and family-held corporations. Farming in Cumberland County is a family business.

The USDA developed the Farm Typology classification system to group farms into homogenous categories based on annual gross sales from the farm and operator characteristics. The classification focuses on family-owned farms, including those organized as sole proprietorships, partnerships and family-held corporations. Small farms are those with gross farm sales below \$250,000. Small family farms are separated into five groups based on sales and operator characteristics. Other farms are separated into three groups: large family farms, very large family farms and nonfamily farms. The definitions for each group are listed below.

### *Small Family Farms*

- Limited-resource farms have sales of less than \$100,000, and the principal operator's total household income is less than \$20,000.
- Retirement farms have sales of less than \$250,000, and the principal operator reports being retired.
- Residential/lifestyle farms have sales of less than \$250,000, and the principal operator reports his/her primary occupation as other than farming.
- Farming occupation/lower-sales have sales of less than \$100,000, and a principal operator who reports farming as his/her primary occupation
- Farming occupation/higher-sales have sales between \$100,000 and \$249,999 and the principal operator reports farming as his/her primary occupation.

### *Other farms*

- Large family farms have sales between \$250,000 and \$499,999.

- Very large family farms have sales of \$500,000 or more.
- Nonfamily farms are organized as nonfamily corporations or are operated by hired managers.

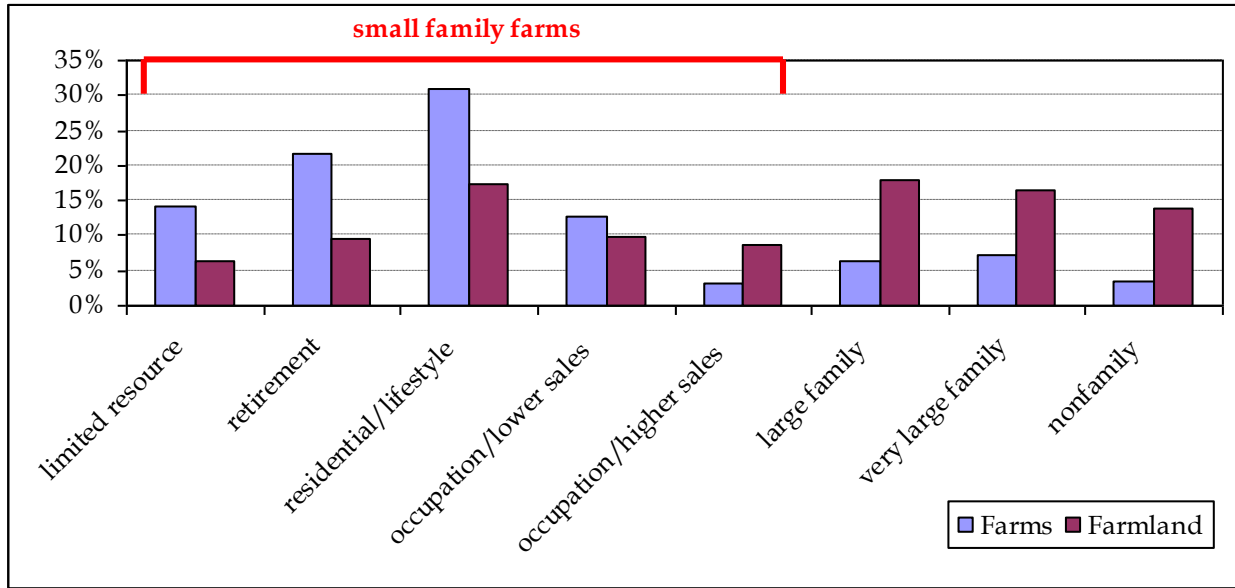
The 2007 Census of Agriculture reported the number of farms and farmland acres by farm typology (Figure 3) and the number of farms and sales income by sales group (Figure 4). Small family farms account for 83 percent of all the farms in Cumberland County and 52 percent of all the farmland, making them the custodians of 45,741 acres of important natural resources. Very large farms, though fewer in number, produce the largest share of agricultural output, accounting for 79 percent of sales income.

Most small farms are residential farms. Residential farm households are supported by off-farm wages and salaries while retirement and limited-resource farm households might receive more than half of their income from Social Security, pensions and investment income.<sup>7</sup>

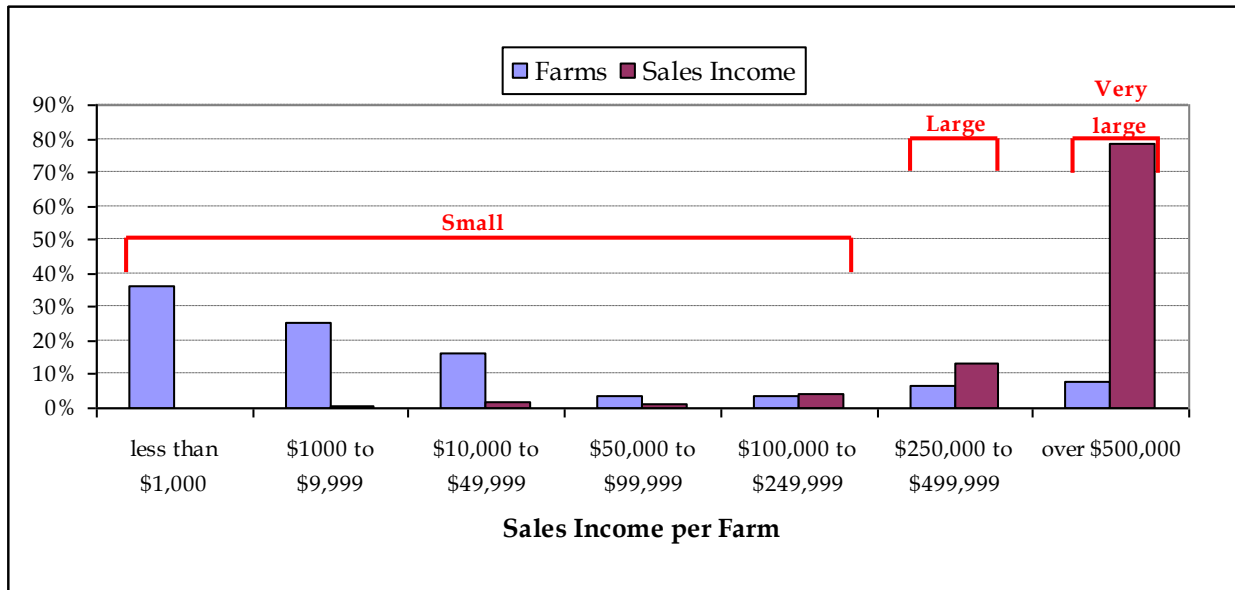
Large and very large farms are tobacco, row crop, swine and poultry operations. Swine and poultry are mostly raised on contract by 71 farms. They had a combined income of \$70 million. Hog and pig (swine) farms had an average income of \$922,000, and poultry farms had an average income of just over \$1 million. Twenty-four tobacco farms had income of \$6.2 million, an average of \$259,833 per farm. Farms in the middle, the small occupation farms, are the most vulnerable because they are too small to compete in the consolidated commodity markets and too large to participate in the direct markets where higher retail prices are received.

The number of large and very large farms has grown since 1992 when they accounted for 7 percent of farms and 64 percent of income (14 percent and 92 percent in 2007, respectively). Farms with sales of less than \$1,000 have also grown since 1992, from 51 to 181, or 12 percent of all farms to 36 percent.<sup>4,5</sup> All other groups of farms have declined in terms of number of farms, percentage of farms and share of income. These comparisons were made without adjusting for inflation, which can be misleading, but the 2007 family farm report<sup>7</sup> did account for inflation and observed the same trends. Many factors have contributed to this trend including changes in tobacco and peanut support programs and concurrent commodity diversification by agricultural producers. Most important is the vertical integration model which the livestock industry has adopted and that tobacco companies are moving swiftly toward. These factors have contributed to the decline in moderate farm size and income not only in Cumberland County, but statewide.





**Figure 3. Proportion of Farms and Farmland in Cumberland County by Farm Typology. Source: 2007 Census of Agriculture**



**Figure 4. Percentage of Farms and Sales Income in Cumberland County by Sales Group. Source: 2007 Census of Agriculture**

## Farm Activities

Farmers in Cumberland County produce a diverse array of crop and livestock products. The primary activities include poultry, swine, soybeans, corn, cotton, forage and tobacco. The livestock operations generate the most market value, and soybeans utilize the most land. Other activities include fruits and vegetables, ornamental crops, and a variety of specialty crop and livestock products.

### *Poultry*

According to the 2007 Census of Agriculture, there are 41 farms in the county raising one or more types of poultry: broilers, layers, pullets, turkeys, ducks and geese. The most common type of operation, with 21 farms, is the layers – chickens that produce eggs for hatcheries. However, 20 of those farms are small-scale with inventories of fewer than 50 birds. There is one farm that keeps between 20,000 and 50,000 birds<sup>a</sup> that are raised on contract for a poultry integrator.

There are 11 farms raising turkeys and nine raising broilers – chickens raised for meat. Turkeys are raised on contract for a poultry integrator and take about 15 weeks to reach market weight. This allows producers to turn their inventory three and one-half times each year. In 2007, the turkey farms kept an average inventory of 282,972 birds and sold 971,656 birds. Broilers are also raised on contract for an integrator. They can be raised and sold in less than 10 weeks allowing producers to turn their inventory five times each year. In 2007, the broiler farms kept an average inventory of 1,141,086 birds and sold 5,973,617 birds.

In addition to these three primary types of poultry operations, there are four farms raising pullets – young chickens for laying flock replacement. Two raise ducks and geese, one raises emus and ostriches, and nine raise other poultry. Combined, the poultry farms generated \$35,913,000 in sales in 2007, ranking 29<sup>th</sup> out of the 99 poultry-producing counties in North Carolina.<sup>5</sup>

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<sup>a</sup> To prevent the disclosure of information about this one large producer, the inventory of laying chickens in Cumberland County was not reported in the 2007 Census of Agriculture.

### **Key Poultry Statistics**

- 5,973,617 broilers sold in 2007
- 971,656 turkeys sold in 2007
- \$35,913,000 = value of all poultry & eggs sold in 2007
- 29<sup>th</sup> out of 99 N.C. counties in value of poultry sales

*Source: 2007 Census of Agriculture*

### ***Pork***

The 2007 Census of Agriculture reported 36 hog producers in the county with a combined inventory of more than 100,000 hogs. In 2007, 621,674 hogs with a market value of \$34,144,000 were sold from those farms. The county ranked 16<sup>th</sup> out of the 89 pork-producing counties in North Carolina.

Hog production consolidated between 2002 and 2007. The number of producers decreased by 16 percent while production increased by nearly five percent. Hog farming was once dominated by small operations that grew crops and hogs that were raised from farrow (birth) to finish,<sup>8</sup> but since 2002 the composition of farms in the county has changed dramatically. In 2002, half of the operations were small-scale with inventories of less than 25 hogs. The other half were large-scale with inventories of more than 1,000 hogs. By 2007, four out five of the small-scale operations were closed while the number of large-scale operations increased by 50 percent.

The increasing size of hog operations is only one element of major structural changes that have occurred throughout the industry during the past two decades. Small farrow-to-finish operations have mostly been replaced by large operations that specialize in one phase of production, a change that has been enabled in large part by the widespread use of contracting.<sup>8</sup> Most of the farms raise hogs on contract for companies such as Smithfield, Murphy and Prestige; 88 percent of the animals sold in 2007 were done so on contract.<sup>4,5,9</sup>

### **Key Pork Statistics**

- 621,674 hogs and pigs sold in 2007
- \$34,144,000 = value of hogs and pigs sold in 2007
- 16<sup>th</sup> out of 89 N.C. counties in value of hog and pig sales

*Source: 2007 Census of Agriculture*

### ***Other Livestock***

Farms in the county raise other livestock besides poultry and hogs. The 2007 Census of Agriculture reported that 91 farms kept an inventory of 3,805 cattle and calves, most of them beef cattle. That year, 1,825 cattle were sold at a value of \$1,177,000. There are 105 farms with 1,025 horses and ponies, 18 farms with 211 sheep and lambs, and 47 farms with 893 meat goats. There are also 18 farms that keep 521 colonies of bees and sold 3,849 pounds of honey in 2007. Additionally, producers in Cumberland County raise crustaceans, alpacas, bison, deer, elk, llamas, mules, burros, donkeys and rabbits. To help feed these animals, 107 farms grow 4,261 acres of hay.<sup>5</sup>

#### **Key Livestock Statistics**

- 3,805 cattle & calves in the County
- 1,825 cattle sold in 2007
- \$1,177,000 = value of cattle sold in 2007
- 4,261 acres of hay grown

*Source: 2007 Census of Agriculture*

### ***Soybeans***

Soybeans are the predominant crop in the county. Statistics on soybean activities in Cumberland County are reported by the USDA National Agricultural Statistics Service (NASS) beginning in 1972 when 34,500 acres were planted.<sup>10</sup> Soybean plantings peaked in 1980 and maintained a declining trend until 2006 with the low occurring in 1995 (Figure 5). Plantings increased in 2007 and 2008 as soybean prices increased and cotton prices fell.

Growers experienced a particularly good year in 2008 when yields and prices were high. They produced 670,000 bushels with an approximate market value of \$5,795,500. Growers in Cumberland County are able to sell their crop to Cargill in Fayetteville, which purchases soybeans for processing. This allows producers to avoid a middle link in the supply chain, such as a grain elevator, that would pay a lower price.<sup>9</sup>

### ***Corn Grown for Grain***

Farmers in Cumberland County have been growing corn for grain since as early as 1925, the first year records are available from NASS.<sup>10</sup> Corn is the second-largest crop grown in the county, and farmers planted an average of 10,200 acres each year from 2000 to 2008. Figure 6

shows the acres of corn harvested<sup>b</sup> every five years beginning in 1925. Harvested acres peaked at 39,890 in 1939 and remained above 30,000 until 1956 when it began a 19-year decline. Corn made a moderate rally in 1975 when acres planted surpassed 20,000 and where it remained until 1986. Although acreage remains low compared to historical averages, plantings were higher from 2006 to 2008 than they had been for the preceding five years. Growers sell their corn to feed mills such as Tyson in Cumberland County and others in surrounding counties.

### *Cotton*

Cotton, like corn, has been grown in Cumberland County since as early as 1925. Figure 7 shows the acres of cotton harvested every five years beginning in 1925. Acreage peaked in 1926 at 52,360 and then began a steady decline through 1967 when 1,100 acres were harvested. Between 1968 and 1990 growers harvested an average of 2,286 acres, with a high of 4,550 acres in 1968 and a low of 650 acres in 1978.<sup>10</sup> Acreage began to increase in 1991 and reached a modern peak in 2000 and 2001 with 14,300 acres harvested. Plantings have mostly declined since then. Only 4,680 acres were harvested in 2008 as some growers put more land in corn and soybeans as their prices have increased. In 2007 the 7,308 bales produced on 4,978 acres had a market value of \$1,448,000.<sup>5</sup> Growers sell their cotton to Quality Gin, Inc. in Cumberland County as well as to gins located in Hoke and Sampson counties.

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<sup>b</sup> Figures for acres of corn planted were not available for the years preceding 1975.

## ***Tobacco***

In 1925, 960 acres of tobacco produced 614,000 pounds of product, a yield of 640 pounds per acre.<sup>10</sup> Since that time, acres in production have risen and fallen, but yields have steadily risen (Figure 8). Acreage peaked at 8,900 in 1946 and maintained a downward trend until 2004. Yields first topped 1,000 pounds per acre in 1945 and 2,000 pounds per acre in 1964. Yields fell below 2,000 pounds per acre only five times between 1970 and 2004. When the federal tobacco quota program ended in 2004, tobacco growers in the county planted 1,515 acres. Thousands of small and medium-sized growers stopped planting tobacco after the buyout creating opportunities for large-scale growers. A few large-scale growers in the county have taken advantage of this opportunity, and tobacco acreage has doubled to more than 3,000 acres. In 2007, 24 farms harvested 4,065,287 pounds of tobacco from 3,071 acres of cropland.<sup>5</sup> The market value of that harvest was \$6,236,000, making tobacco the most valuable crop grown in the county in 2007.

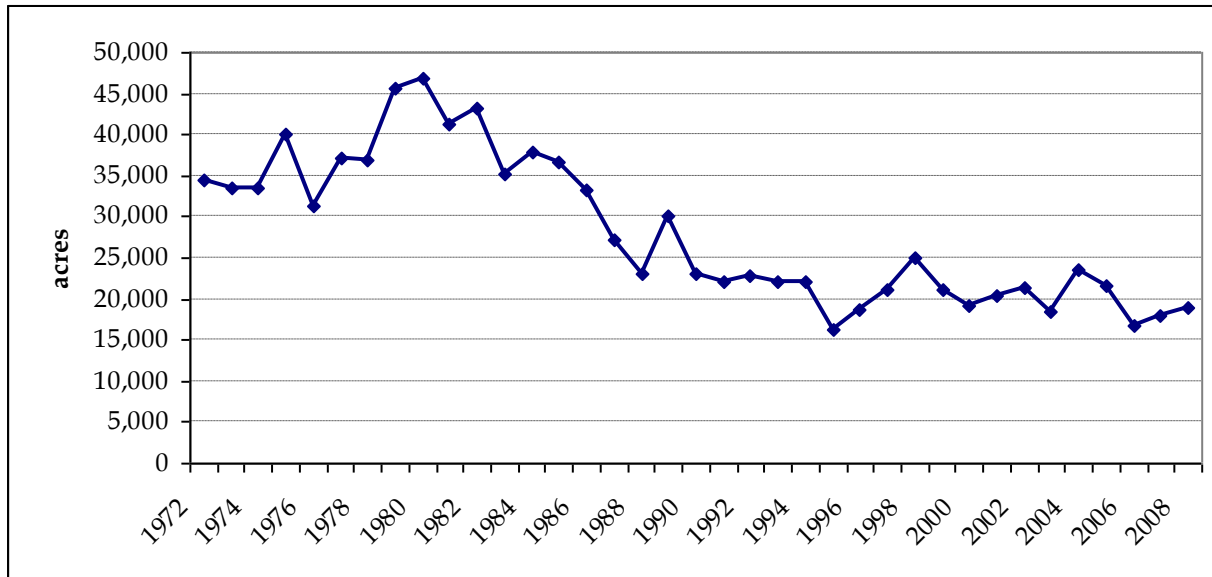
## ***Other Crops***

In addition to corn, cotton and tobacco, farmers in Cumberland County grow a variety of grains, fruits, vegetables, berries and ornamental crops. Vegetables and melons were grown on 2,485 acres by 57 farms and had a value of \$4,013,000 in 2007.<sup>5</sup> The major products grown are sweet potatoes, cucumbers and watermelons. Farmers also grow apples, strawberries, blueberries, pecans and other fruits, berries and nuts. Farming is not limited to food crops. The ornamentals industry – nursery, greenhouse, floriculture and sod – produced \$1,856,000 of products in 2007.<sup>5</sup> There is one grower of cut Christmas trees who rounds out the diversity of activities in the county.

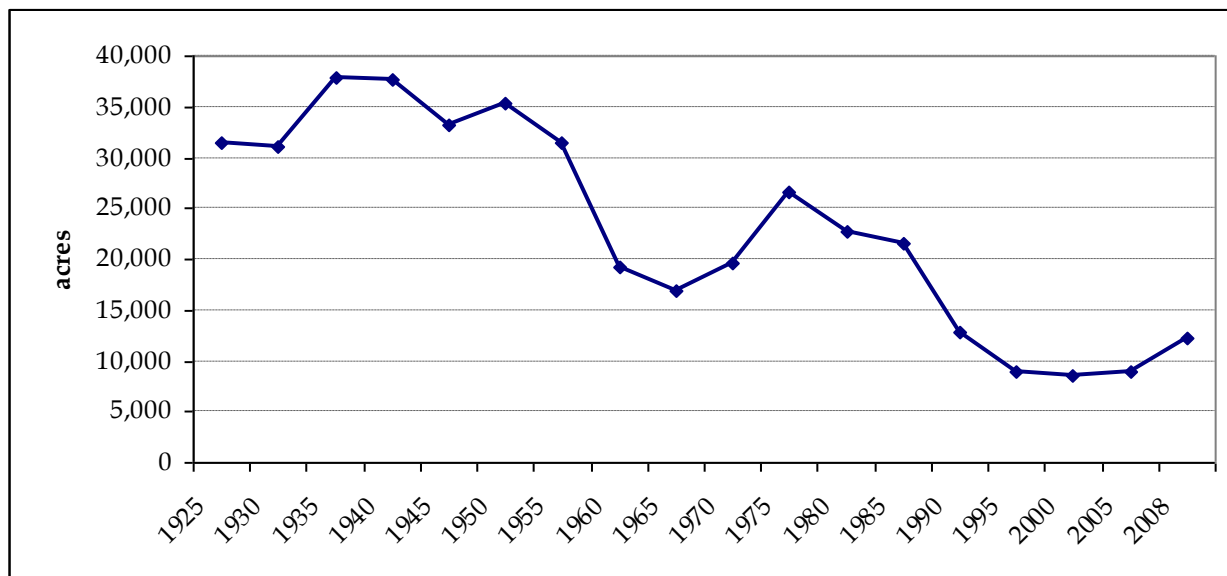
### **Key Crop Statistics**

- 2,485 acres of vegetables & melons
- \$4,013,000 = value of vegetables & melons sold in 2007
- \$1,856,000 = value of ornamental products sold in 2007

*Source: 2007 Census of Agriculture*



**Figure 5. Acres of Soybeans Planted in Cumberland County. Source: USDA National Agricultural Statistics Service**



**Figure 6. Acres of Corn Harvested for Grain in Cumberland County. Source: USDA National Agricultural Statistics Service**

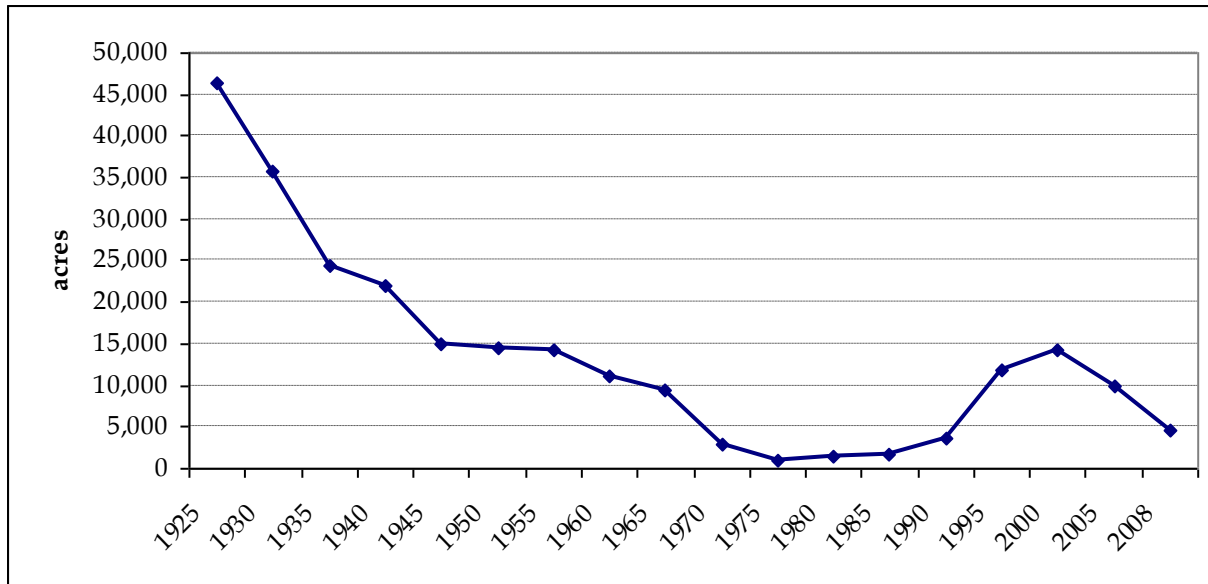


Figure 7. Acres of Cotton Harvested in Cumberland County. Source: USDA National Agricultural Statistics Service

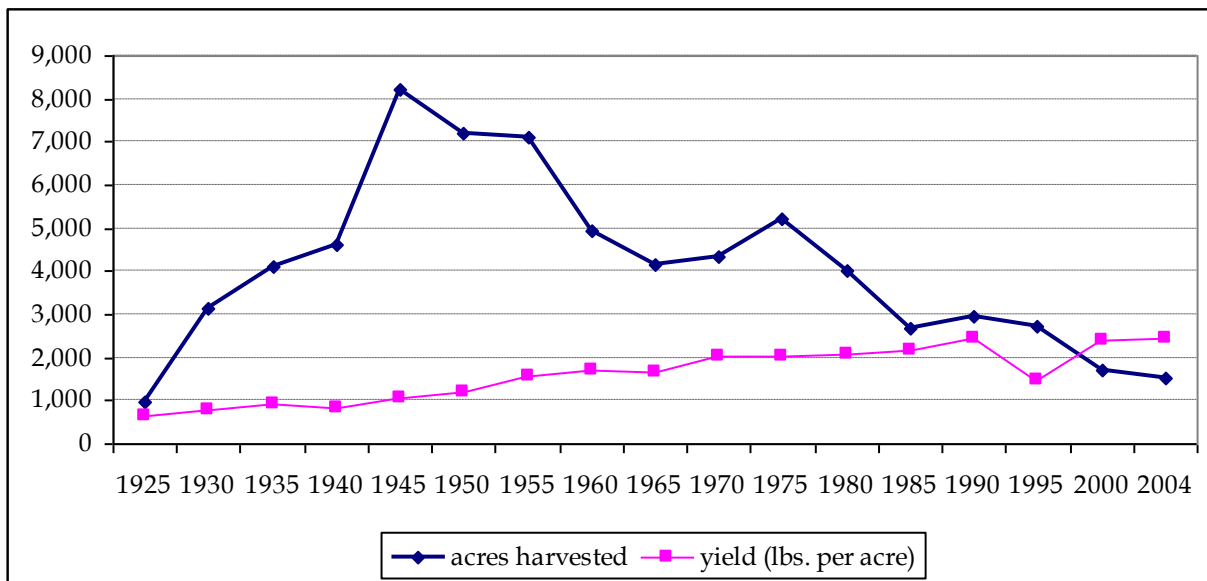


Figure 8. Tobacco Production in Cumberland County. Source: USDA National Agricultural Statistics Service



## Forestland and Timber Sales

Forestry is a major land use in Cumberland County. Private forests account for 177,120 acres<sup>c</sup> or 42 percent of the county's total land area.<sup>6</sup> Most forestland is nonindustrial private forests, meaning they are owned by individuals, not timber companies.<sup>11</sup> Map 3 illustrates the forest areas identified by the 2008 N.C. Forestry Land Assessment. Figure 9 shows the distribution of private forests by type.

The primary commercial forest types are loblolly pine, longleaf pine and hardwoods. Oak/gum/cypress forests are found in wetlands and have commercial value, though not as much as loblolly and longleaf pine. Map 4 uses 2001 land cover data from the U.S. Geological Survey to illustrate the allocation of forestland by type. The areas identified as wetlands correlate with the areas of oak/gum/cypress forest type.

Forestry is different from farming in two important ways. Whereas the majority of farmland is owned by the farm operator, forestland is owned by non-industrial private landowners. In many cases the forestland owner utilizes the land for multiple reasons including recreation and investment. Since the landowner is not in the forestry business, the timber is sold to a logger or other company that takes responsibility for the harvest, transportation and marketing of the trees.

The second way in which forests are significantly different from farms is the length of time trees take to mature after being planted. Most farm products grown in the county are started and sold within one year. Trees grown for timber take 30 to 90 years to reach harvesting age. Because a forest or stand within a forest takes so long to mature, it is not easy to determine a landowner's intention regarding harvesting. Forests that are efficiently managed for timber production have trees that are optimally spaced for their size and are classified as fully stocked. Medium stocked forests have fewer trees than optimal but are still considered to be well managed. Using these classifications it is estimated that 81 percent of the private forests are being managed for commercial production.<sup>6</sup>

Loblolly is the primary commercial forest type in the county. These trees grow fast with a rotation of 30 to 40 years and are used for framing lumber. Longleaf pine and hardwoods grow much more slowly, taking 60 to 90 years to reach maturity. They produce higher-valued lumber with applications in which a stronger material is needed or where the wood surface will be exposed in the finished product.

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<sup>c</sup> includes the 33,947 acres of woodland on farms reported by the 2007 Census of Agriculture

In 2008, forestland owners received \$2,152,887 for timber harvested from their properties for which mills paid \$3,892,402. Loggers, haulers and intermediaries received the difference of \$1,676,515.<sup>12</sup> The forest product industry in Cumberland County and the region has felt the impact of the global recession and the subsequent decline in construction and housing. As the demand for products declined, timber markets and the industry have experienced a notable decline in income, and many forest product manufacturers and distributors in the region have closed.

### **Longleaf Pine and Red-Cockaded Woodpecker**

The longleaf pine, North Carolina's state tree, once covered nearly 90 million acres of coastal plains in the southeastern United States.<sup>13</sup> Today the forests cover only about three million acres.<sup>13</sup> The forests, which burned frequently, were home to a wide variety of plant and animal species such as bobwhite quail, fox, turkey, deer, wildflowers and legumes. The longleaf pine tree is highly resistant to pine beetles, ice, and fire, and historically provided construction lumber, tar, and pitch for buildings and ships; and a resin used to refine turpentine. Longleaf pine forests also yielded food and medicines and were used to graze cattle. The Sandhills region is one of the last remaining strongholds of longleaf pine in the country and several organizations, including Fort Bragg, The Nature Conservancy, U.S. Fish and Wildlife Service, Sandhills Area Land Trust, and Sandhills Ecological Institute, are working to restore and protect this vanishing ecosystem.

An underlying goal of these organizations is to protect the red-cockaded woodpecker, an endangered bird that lives predominantly in longleaf pine forests. The red-cockaded's range historically extended from Florida to New Jersey and Maryland, as far west as Texas and Oklahoma, and inland to Missouri, Kentucky, and Tennessee. Today it is estimated that there are about 6,000 groups of red-cockaded woodpeckers, or 15,000 birds, from Florida to Virginia and west to southeast Oklahoma and eastern Texas, which represents about one percent of the woodpecker's original range.<sup>14</sup>

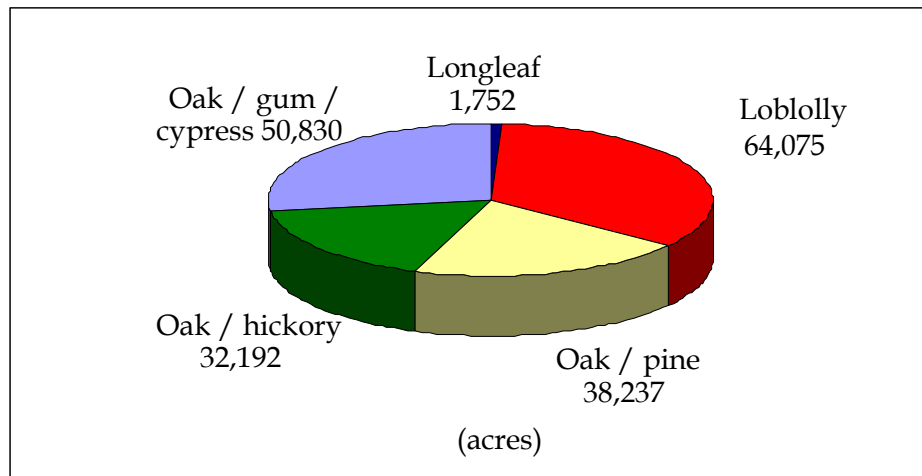
The longleaf pine and the red-cockaded woodpecker are important issues for Fort Bragg. In 1992, a U.S. Fish and Wildlife Service biological opinion resulted in significant training restrictions on the Fort Bragg as part of the requirements to recover the red-cockaded woodpecker. In

order to meet recovery requirements for the woodpecker, Fort Bragg has been working with stakeholders to preserve and restore longleaf pine forests and manage critical habitat on private lands outside Fort Bragg. More than 12,000 acres of longleaf pine habitat have been preserved in Cumberland, Hoke, and Moore counties through Fort Bragg's North Carolina Sandhills Conservation Partnership.<sup>15</sup>

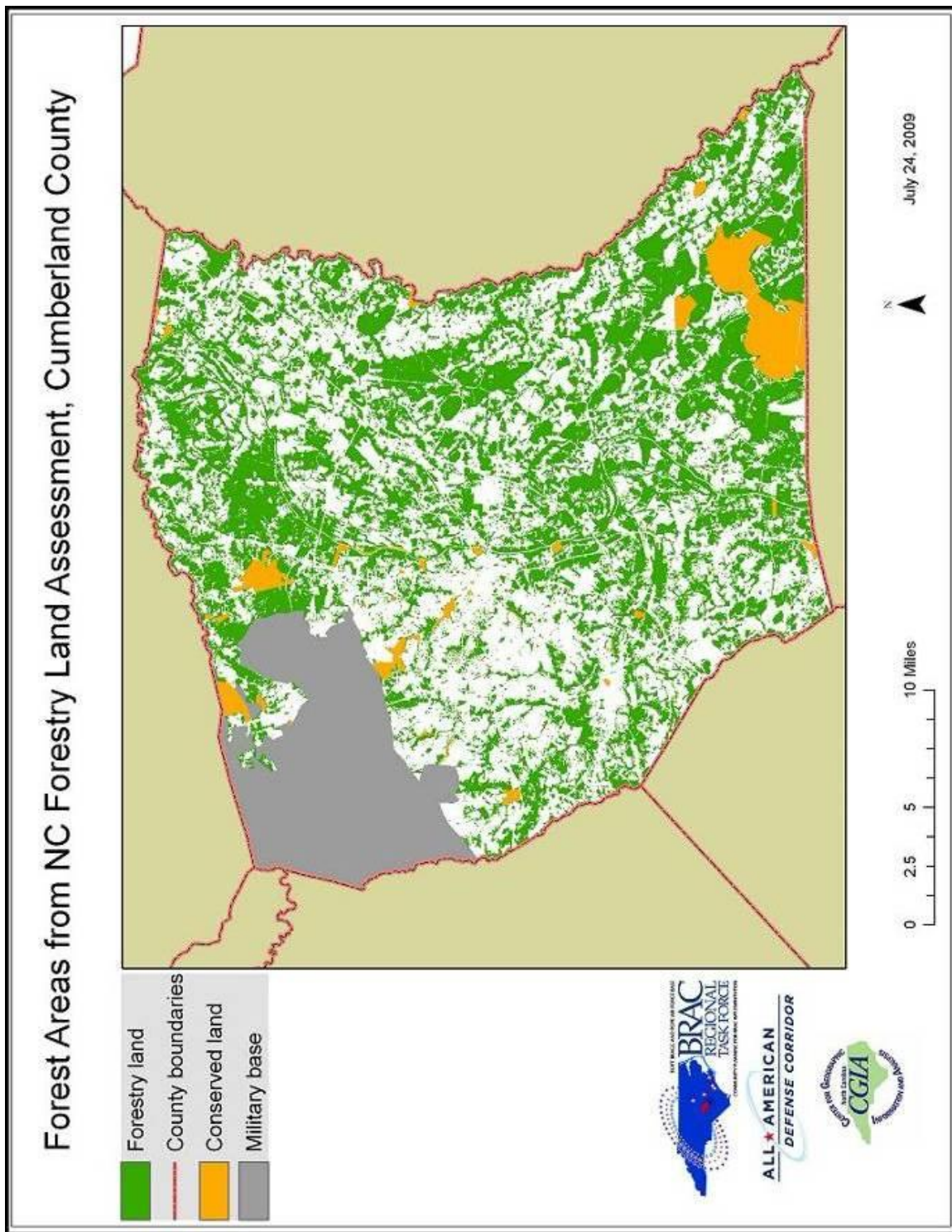
Pine needles, also known as pine straw, are a popular type of landscape mulch that can be harvested from stands of longleaf and loblolly pines that are managed for timber production or other uses. Longleaf needles generally sell for a higher price than loblolly and are easier to bale. Longleaf stands also outperform loblolly because loblolly trees shed more pine cones and twigs after about 15 years, which adds significant time and costs for cleaning. Pine needles can be harvested from loblolly stands beginning in year eight<sup>16</sup> and from longleaf pines in year 10.<sup>17</sup> This provides an income stream between timber harvests. Harvesting pine needles is also compatible with conservation forest management. Like timber, harvesting pine needles does not have to be done by the landowner. Thousands of acres of forestland around the region are leased by pine needle producers.

In 2007, Cumberland County was home to 27 forestry-related businesses including wood product and furniture manufacturers that employed 452 workers who earned nearly \$15.5 million in wages.<sup>18</sup> In 2006, the various forestry industries added more than \$44 million to the county's economy.<sup>1</sup> A list of wood buyers compiled by the N.C. Division of Forest Resources identified 43 buyers who purchase wood from Cumberland County. Carolina Forest Products out of Pittsboro is establishing a wood yard in Wade that will likely improve prices paid to Cumberland County landowners and loggers.<sup>9</sup>

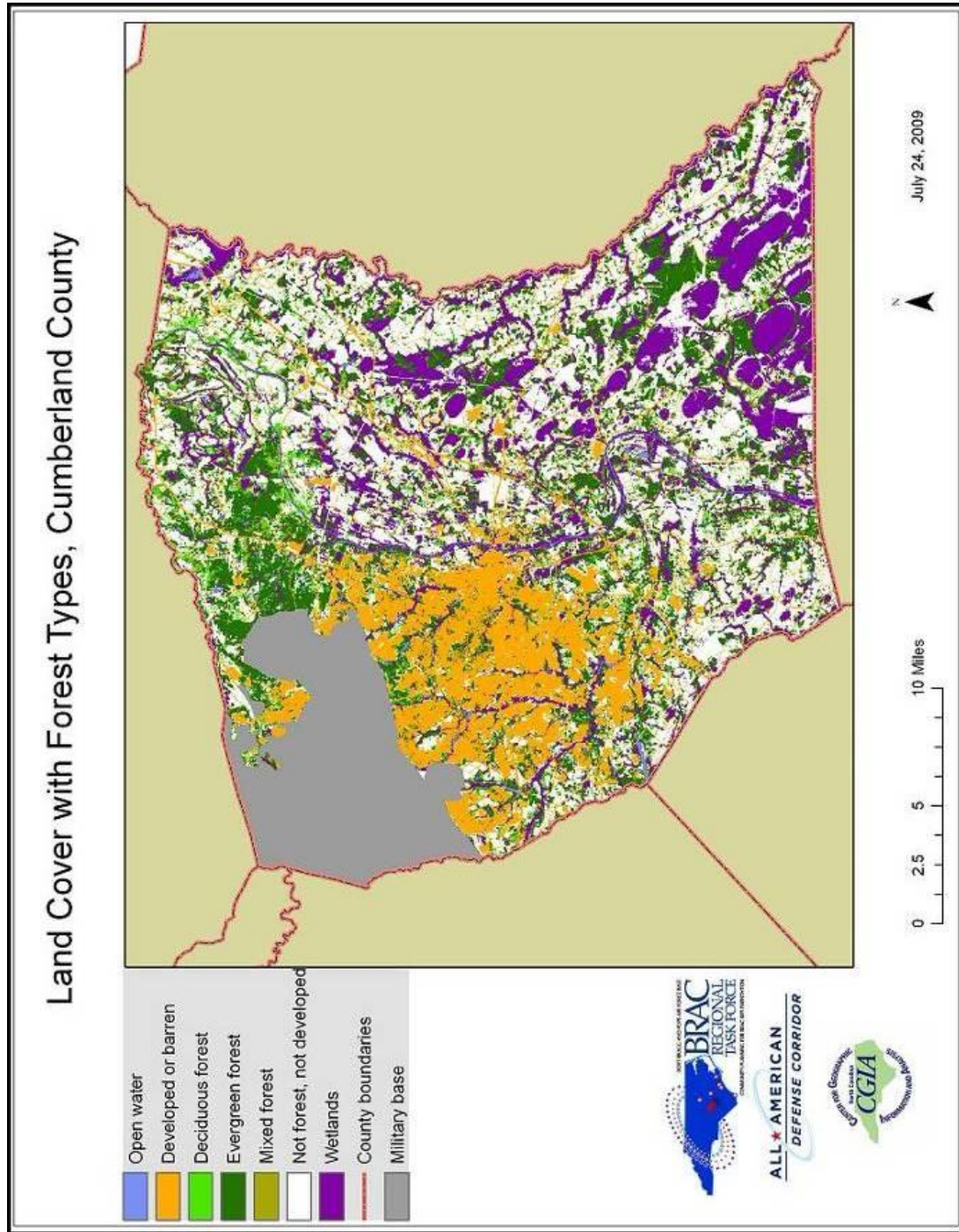
Timber processors and wood product manufacturers locate their operations based in part on the ability to obtain timber when they need it and at competitive prices. The forestry-related companies in Cumberland County undoubtedly purchase wood from surrounding counties. However, if those businesses are to be retained and if this sector of manufacturing is to be expanded, then they will probably want to procure a minimal amount of their inputs from within the county. Otherwise, when companies are seeking a location or existing companies have to make capital improvements, they may choose to locate in another county with more timber production.



**Figure 9. Acres of Private Forests in Cumberland County by Forest Type.**  
Source: National Forest Service, 2007 Forest Inventory and Analysis



Map 3. Forest Area



**Map 4. Forest Areas by Forest Type and Land Cover**



# Challenges to Agriculture

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## Profitability

Shrinking profit margins were cited as one of the most significant threats of the next 10 years by farmers in the 11 counties of southeast North Carolina<sup>19</sup>. Figure 10 shows income, expenses and net income for all farms in Cumberland County from 1990 to 2007. Net income exceeded \$20 million (2005 dollars, adjusted for inflation) in seven of the eight years from 1990 to 1997, yet from 1998 to 2007, it surpassed \$10 million only four times and has fallen below \$5 million five times.<sup>20, 21</sup>

The Census of Agriculture reports that in 2007, less than half of the farm operators in the county realized a net gain. The overall average net cash income to Cumberland County operators was \$7,390. The proportion of operators in the county with net gains, 47 percent, is typical. The proportions of operators in the Fort Bragg region, North Carolina, and the United States with net gains in 2007 were 45 percent, 43 percent and 47 percent, respectively. However, those operators in the Fort Bragg region, excluding Cumberland County, earned twice as much as Cumberland County operators with net gains, while those around North Carolina and the United States also outperformed Cumberland County farmers by a significant margin (Figure 11).

### *Who receives the net income?*

The Census of Agriculture differentiates between farm operations and farm operators for the purpose of reporting net cash income.

*Net cash farm income of the operations* is derived by subtracting total farm expenses from total sales, government payments and other farm-related income. Depreciation is excluded from expenses.

*Net cash farm income of the operators* equals the operators' total revenue (fees for producing under a production contract, total sales not under a production contract, government payments and farm-related income) less total expenses paid by the operator. Revenue from the sale of products grown under contract and expenses paid by the contracting firm are not included. Depreciation is excluded from expenses.

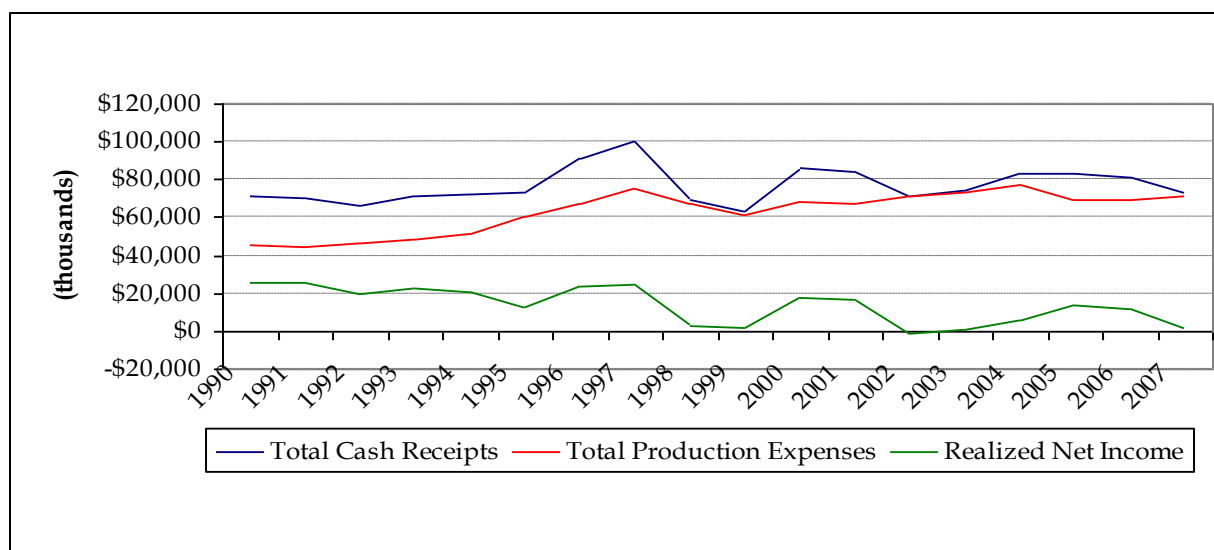
The difference is important because the purpose of this plan is to assess the challenges and enhance the viability of small, family-owned farms. Farmers will not stay in business if they personally are not earning a reasonable living, despite the overall profitability of the enterprise.

Profitability is especially difficult for small family farms. The 2007 Census of Agriculture did not report net income figures by farm typology at the county level, but comparisons were made for farms in North Carolina and are shown in Table 1.

Operators of limited resource, residential/lifestyle, and occupation/lower sales farms each had negative average net incomes in 2007, and retirement farms had an average net income of only \$160. Occupation/higher sales farms earned an average net income of \$40,124. Gross revenue has a significant effect on profitability. Occupation/higher sales grossed an average of \$170,388 in 2007, whereas all other small, family farms grossed an average of only \$10,152. As a result, 77 percent of occupation-higher sales operators earned a net gain while only 35 percent of the other small family farm operators were able to make a profit. Large family, very large family and non-family farms combined averaged more than \$1 million in gross income in 2007, and 79 percent earned an average net gain of \$252,190.

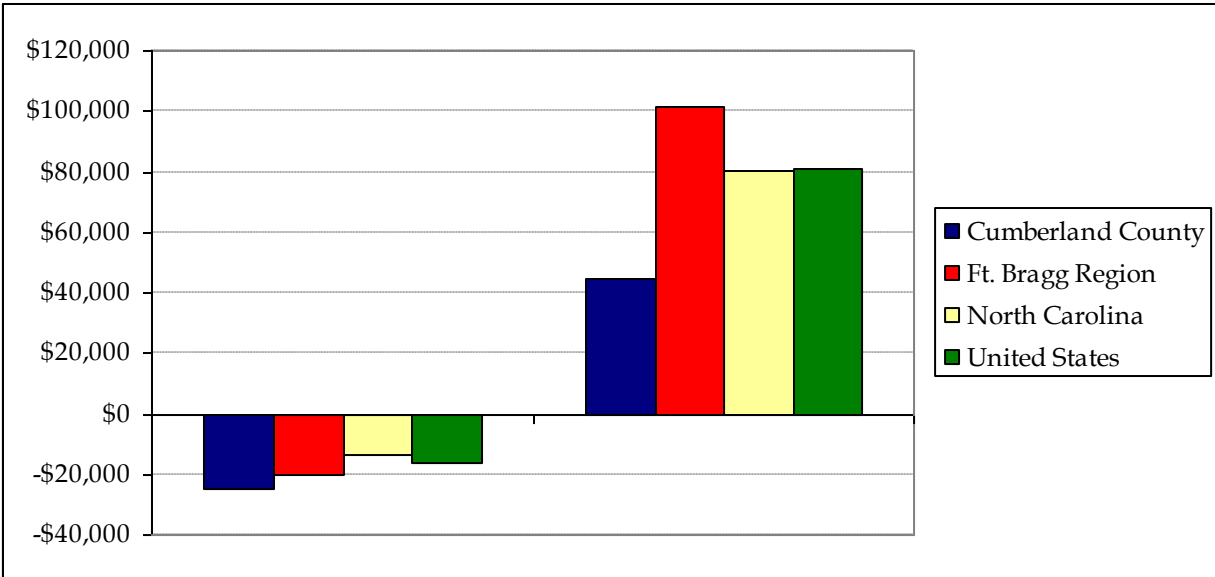
### *Property Taxes and Profitability*

Producers in many areas complain about property taxes and identify them as inhibiting profitability. Almost 80 percent of the producers surveyed for this plan said that lower property taxes would help them keep their land in agriculture, and 50 percent said that local government was not supportive regarding the issue of reasonable taxes. Property taxes are significant to small farms and represent more than 10 percent of all expenses paid by limited resource, retirement and residential farms, and consume 10 percent of sales income from occupation/lower sales farms in North Carolina. (Figure 12)

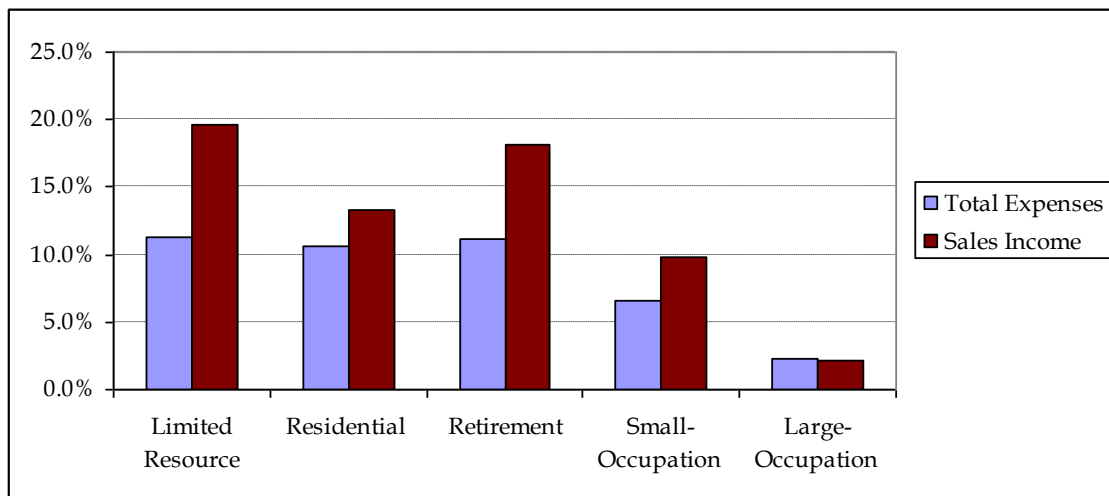


**Figure 10. Income and Expenses of Farms in Cumberland County. Source: U.S. Bureau of Economic Analysis**





**Figure 11. Average Net Gains and Net Losses to Farm Operators in 2007. Source: 2007 Census of Agriculture**



**Figure 12. Property Taxes Paid by N.C. Farmers as a Percentage of Total Expenses and Sales Income. Source: 2007 Census of Agriculture**

	Small Family Farms					
	Limited Resource	Retirement	Residential /Lifestyle	Occupation Lower Sales	Occupation Higher Sales	Other Farms
<b>Gross Income</b>	\$8,598	\$14,455	\$10,280	\$27,407	\$202,155	\$1,144,172
<b>Net Income</b>	-\$3,219	\$160	-\$2,868	-\$1,045	\$40,124	\$184,120
<b>Operators w/ Net Gains</b>	35%	41%	29%	41%	77%	79%
<b>Average Net Gain</b>	\$6,559	\$11,935	\$11,220	\$20,195	\$72,932	\$252,190
<b>Operators w/ Net Losses</b>	65%	59%	71%	59%	23%	20%
<b>Average Net Losses</b>	\$8,506	\$8,038	\$8,656	\$15,982	\$69,354	\$75,749

**Table 1. Average Income and Earnings of N.C. Farm Operators in 2007 by Farm Typology. Source: 2007 Census of Agriculture**

## Population Growth

In 1990, Cumberland County had a population of 274,566<sup>22</sup>. Between 1990 and 2008 the population grew by an estimated 15 percent to 312,696 in 2008<sup>23</sup>. During the same period the county lost 10,178 acres of farmland.<sup>4,5</sup> The population continues to grow and is projected to reach 352,189 by the year 2029.<sup>23</sup> Three potentially negative implications to agriculture of this growth are: 1) pressure to develop farmland, 2) increasing values of farmland and 3) conflicts with non-farm neighbors.

Farmland is typically flat and treeless, making it attractive to developers who naturally want to minimize the cost of site preparation. Thus, population growth and the need for housing leads to development pressure on farmland. Residential and commercial uses add value to land, so as farms and land near farms are developed, the value of remaining farmland will increase. Farmland in Cumberland County is particularly vulnerable to these effects.

Many farmers are nearing retirement age and have no one to take over the farm operation. Farm profitability makes it difficult for aspiring farmers to purchase land. With land prices rising and no one to buy or take over the farm business, retiring farmers will be left with the only logical option of selling their land for development. Furthermore, settlement patterns that break up contiguous farmland (e.g. “checker board”) will limit future farm expansion and production options.

### ***Rising Land Values: A Catch 22***

There is a growing concern in the state and nation about the rising value of farmland. The fundamental concern is that farm revenues, net of all other expenses, are insufficient to cover the costs of purchasing land. This problem affects existing farmers who want to expand their operations as well as aspiring farmers seeking land to start an operation. The catch to this problem is that as landowners, existing farmers benefit from rising land values. From a business perspective, the increased value is reflected in the farm’s net worth and so increases the farmer’s ability to borrow capital. From a personal perspective, the land is often the farm family’s only substantial asset and is the investment that can be sold to pay for retirement. Therefore, communities must determine how to keep their farmland affordable for future farmers without causing financial injury to current farmers.

Farming is a production enterprise conducted in an open area and sometimes at all hours of the day and night. Forest management involves prescribed burning. New residents, who may have been attracted by the rural character of an agricultural community, often do not anticipate the dust, smoke, odors and noise that accompany the production of crops and livestock, and the management of forests. Thirty-four percent of the producers surveyed have had a problem with a neighbor concerning their farm operation. Although bona fide farms in North Carolina are protected by state statute, ongoing complaints from neighbors can affect a producer’s quality of life and become a contributing factor in his decision to sell the land for development. State law may protect the producer in the event of a lawsuit, but it does not prevent producers from having to defend themselves in the lawsuit. This is likely to be a costly process that may result in a settlement that forces the producer to cease or alter his/her activities. Additionally, increased traffic on rural roads makes moving farm equipment difficult. Harassment by aggressive drivers is a common complaint among producers in North Carolina.

### **Aging Farmers**

In Cumberland County, the average age of principal farm operators is 56.7, which is slightly younger than the North Carolina average of 57.3 and the U.S. average of 57.1.<sup>5</sup> The average age of the county’s workforce is approximately 39.3 years.<sup>24</sup> Figure 13 shows the distributions of the county’s workforce and farm operators by age. Of the county’s 500 principal farm operators, 96

of them are over 70 years of age, three times the number that are under the age of 35. The implication is that there are not enough young farmers to take over the operations from farmers who will be retiring over the next 10 to 20 years. This is a threat noted by Cooperative Extension agents throughout southeast North Carolina<sup>19</sup> and echoed by local producers, 56 percent of whom expect to retire in the next 20 years. (Figure 14)

If 56 percent of all farmers in the county retire during the next 20 years, then 49,726 acres of farmland will transition to new owners or operators. It is likely that some of the land will be incorporated into other farms, but with development pressure and land values rising, a real threat is that much of the land will be sold and converted to non-agricultural uses. The surveyed producers indicated their intentions for the transition of their farms (Figure 15) and many plan to transfer their land to family members for farming. Of greater concern, however, are the 44 percent who intend to transfer their land out of farm use. Farm transition is a concern of producers. Sixty-nine percent of those surveyed identified estate planning for farm transition as very important and 25 percent said it is somewhat important.

Economics are a challenge to young, aspiring farmers. Most farms in the U.S. only make a profit when gross sales are at least \$50,000. The average asset base of farms with sales at or above \$50,000 in 2007 was \$1.9 million<sup>25</sup>. Even the tradition of inheriting farm assets has its challenges. Farmers, like the general population, are living longer so the transfer of assets to the next generation is delayed. Furthermore, farm assets have commonly been split among multiple family members and as farms become increasingly fractured through successive generations, the likelihood that an heir will receive a share large enough to support a family is diminished. One-third of beginning farmers in the U.S. are over the age of 54,<sup>25</sup> which might be explained by the need to accumulate the wealth required to start an operation.

## **Loss of Rental Land**

Farmers have always rented land. Of the 500 farms in the county, 114 rent 59 percent of their land and 37 rent all of their land.<sup>5</sup> Combined, the two groups rent 29,243 acres, or one-third of all the county's farmland. Even when farmland is priced by its agricultural use, purchasing it is not always feasible or prudent to a farmer. Having an inventory of rental land is therefore crucial to the agricultural industry's viability. Unfortunately, just as the amount of total farmland in the county has been declining, so has the amount of available land to rent, forcing farmers to seek rental acreage outside of Cumberland County. Since 1992, when 43,685 acres were rented, the amount of rented farmland in the county has decreased by 14,442 acres with only 4,264 acres of formerly rented land now under the ownership of farm operators.<sup>26,5</sup>

Producers and agricultural agents have stated that a lack of available rental land has inhibited some farmers from expanding their operations in recent years.<sup>27, 28</sup> Additionally, concerns have been raised about farmers from outside the county who have been leasing local land at three to five times the normal rental rate, but who are leaving after only a few years and after exhausting the soil's fertility. They pay more in rent but save on soil maintenance. This behavior can cause one or more adverse impacts: 1) the landlord will lose trust in all farmers and no longer offer the land for rent; 2) local farmers will have to pay higher rent; and 3) local farmers will incur above-normal costs and lost productivity while restoring the fertility of the soil on the depleted fields.

Rental rates for agricultural land have increased in recent years. The N.C. Department of Agriculture and Consumer Services reports that cash rents for high productivity soils and medium productivity soils increased 47 percent and 42 percent from 2006 to 2008, respectively.<sup>29</sup>

## **Farm Labor**

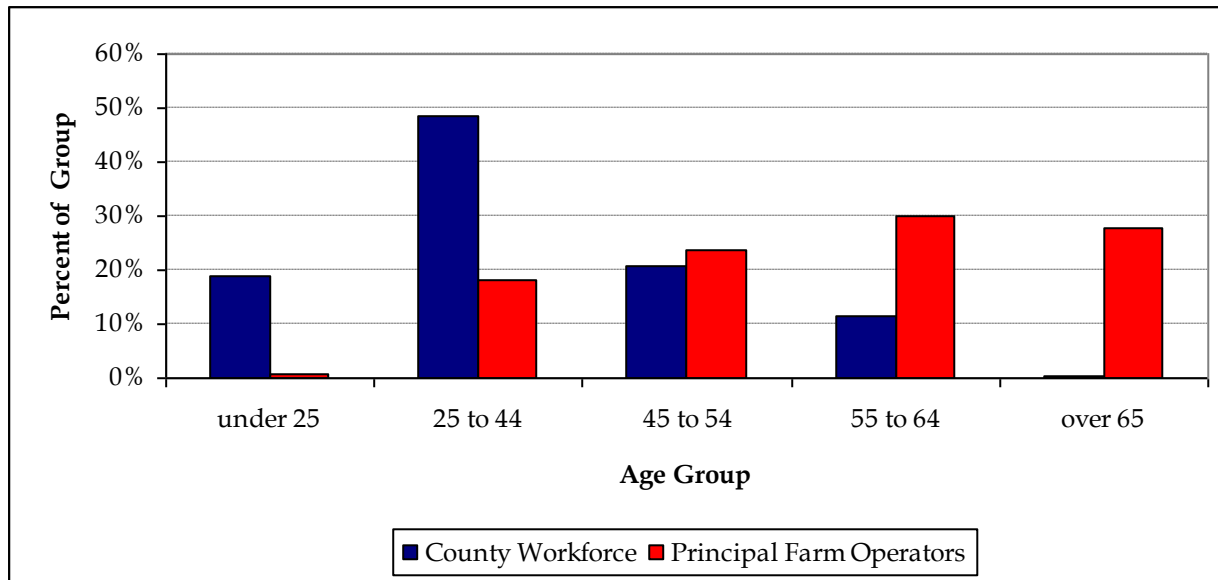
Labor, like most other issues in agriculture, is becoming increasingly difficult to control. Labor shortages are a primary concern of farmers and Cooperative Extension agents in southeast North Carolina.<sup>19</sup> Seventy-four percent of surveyed producers identified immigration issues and the need for skilled labor as very important or somewhat important. Many of the activities involved in raising crops are seasonal, and some require temporary labor. Because many U.S. citizens do not want to perform the work, farmers depend on migrant workers, many of whom are immigrants from Mexico.

The impact of immigrants—legal and illegal, migrant and resident—on local education and health services has engendered negative attitudes toward immigrants by non-farm residents. Cumberland County residents and leaders need to know the farmers' needs for full-time and migrant labor and the contributions they make to the agricultural industry. These benefits must be compared to the costs to the county before leaders adopt or reject immigration policies and actions.

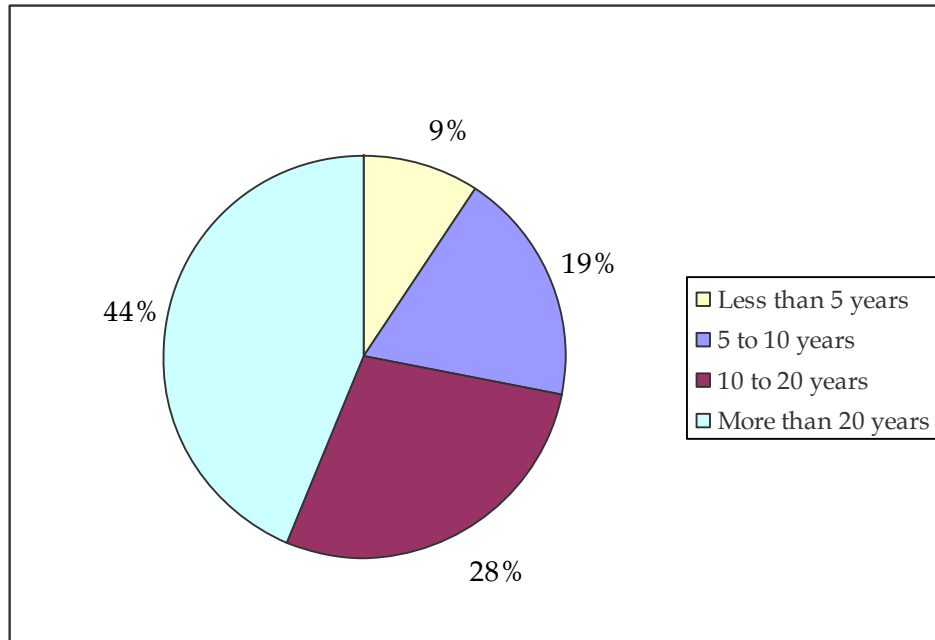
## **Apathetic and Negative Attitudes**

Aging farmers and changes to the agricultural industry—current and pending—place a tremendous amount of uncertainty on the future of Cumberland County's agricultural lands. The future of farms and forests depends significantly on the decisions of the producers who own and operate on those lands today.

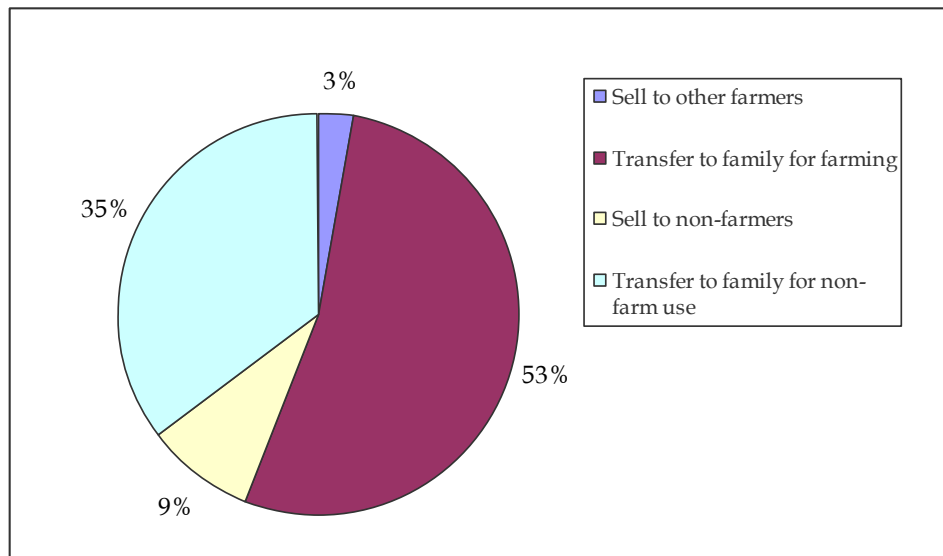
Farms and forests are intertwined with non-agricultural lands. Noises, dust and odors are not confined by property lines. Tractors and other equipment use the same roads as residents driving to work. Because of these facts, the family businesses that comprise most of the agricultural industry need the support of the non-agriculture community to survive. More importantly, Cumberland County's agricultural industry is dependent upon the continued support of local government leadership and the entire citizenry to ensure its preservation.



**Figure 13. Age Distribution of the Cumberland County Workforce and Farm Operators. Sources: 2007 Census of Agriculture, 2007 American Community Survey**



**Figure 14. Cumberland County Producers Survey: Years to Retirement**



**Figure 15. Cumberland County Producers Survey: Retirement Plans for Land Transition**

# Resources and Opportunities for Agriculture

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## **Programs and Tools Utilized by Cumberland County**

### *Farm Advisory Board*

The Farm Advisory Board is a nine-member panel that serves as a watchdog for development in farm and rural areas, protects agricultural land, preserves the farming industry, and protects the character of the rural areas in the county. The members are appointed by the county commissioners, serve indefinite terms and receive no compensation for their service. The duties of the board are:

- Promote the health, safety, rural agricultural values and general welfare of the county.
- Increase identity and pride in the agricultural community and its way of life.
- Encourage the economic and financial health of agriculture.
- Make recommendations to the Cumberland County Joint Planning Board and Board of Commissioners regarding issues involving farmland in Cumberland County.

### *Present-Use Value Tax Program*

Present-Use Value, or PUV, is a program established in 1973 by N.C.G.S. §§ 105-277.2 to .7 and administered by the county assessor through which qualifying property can be taxed based on its use as agricultural, horticultural or forest land rather than for its “highest and best” use. The objective of the program is keep family farms in the hands of family farmers. The present-use value of a parcel is determined by the quality of its soils. The North Carolina Use-Value Board sets the value schedule based on the rent a parcel could receive given its soils and its use for agriculture, horticulture or forestry. Qualifying property is assessed at its present-use value rather than its market value. Deferred taxes are the difference between the taxes due at market value and the taxes due at the present-use value. Deferred taxes for the current year plus the previous three years will become due and payable with interest when a property loses its eligibility in the present-use value program.

This program is arguably one of the most important programs offered to producers in North Carolina, especially to those in counties with high land values. Indeed, 81 percent of Cumberland County producers surveyed for this plan ranked PUV as very important, and an



additional 16 percent said it is somewhat important. In 2009, landowners enrolled 125,062 acres of farm and forest land in the program (Map 5)<sup>30</sup>.

Each year, a number of properties are removed from the program either by notification from the landowner or because they were discovered by the tax assessor to be out of compliance with the program's requirements. In each of the three years from 2007 to 2009, the county collected an average of \$177,151 in rollback taxes, the deferred taxes for the current year plus the previous three years.

### ***Voluntary Agricultural Districts***

In 2006, the county adopted the Voluntary Agricultural District Ordinance. "The purpose of the ordinance is to promote agricultural and environmental values and the general welfare of the county and, more specifically, increase identity and pride in the agricultural community and its way of life, encourage the economic health of agriculture, and increase protection from non-farm development and other negative impacts on properly managed farms." The ordinance established a Voluntary Agricultural District Program, which provides the following benefits:

- Preserves and maintains agricultural areas in the county.
- Informs non-farming neighbors and potential land purchasers that the participating farm may emit noise, dust and odors, which may avoid conflicts between neighbors and potential nuisance claims.
- Gives the farming community an enhanced voice in Cumberland County commissioners' decisions affecting farmland.
- Conserves open space and natural resources as the county's population and development expand.

To qualify for the program, a farm must meet criteria related to size, income and land management. To participate in the program, the farmer must enter into a conservation agreement with the county that prohibits non-farming use or development of the land for at least 10 years. The agreement allows for the creation of not more than three house lots that meet applicable zoning and subdivision regulations. Farmer participation in the program is voluntary and the farmer may terminate his/her participation at any time. As of October 2009, 36 farmers had enrolled 13,704 acres in the program (Map 6).

### ***Conservation Incentives Program***

On July 7, 2004, the Cumberland County Board of Commissioners approved the Military Mission and Operations Critical and Important Tract Conservation and Protection Policy. The policy enables the county to make inducement payments to owners of qualifying land who

enter into a conservation agreement with the county. Qualified tracts are five acres or larger, are designated Military Mission and Operations Critical or Important, AND are within one mile of the Fort Bragg boundary – the area studied for the Fort Bragg Small Area Plan. When the policy was adopted, 62 parcels totaling 2,913 acres met these criteria. Owners of these qualifying tracts must also be current in their *ad valorem* property tax payments. Landowners who enter into agreements for five to nine years receive annual payments equal to 48 percent of the property tax payments made to the county. Landowners who enter into agreements for ten or more years receive annual payments equal to 96 percent of the property tax payments.

To date, only one agreement has been made. In May of 2008, 464 acres were placed under an agreement. Agricultural uses of the land are allowed under the agreement. Agricultural uses and activities are given a broad definition including those more specifically associated with farming and forestry. The agreement goes so far as to state in one section: “. . . to allow the widest variety of agricultural uses....” This program could be expanded or replicated to include areas outside the Fort Bragg buffer zone providing a direct way to address the property tax complaints of farmers.

### ***Comprehensive Plans***

Comprehensive plans are documents that provide the framework to guide local governments’ actions. A plan contains a long-term vision for the community that is used to establish goals, objectives, policies and actions to guide development and the use of community resources. Subject areas of a plan can include: economic development, land use, recreation, transportation, conservation and infrastructure.

The protection, support and development of agriculture should be addressed in the economic development, land use, transportation and infrastructure sections. The agricultural industry is poised to undergo significant changes as the nation and the world adapt to population growth, climate change, the need to shift energy production away from oil and the discovery of pharmacological benefits of plants. The agricultural industries should not be left out of the county’s economic development plan. The land-use section can identify agricultural areas for protection against development. The transportation and infrastructure sections can help facilitate the protection of agricultural lands by directing the extension of roads, sewer and water services away from agricultural areas.

In developing their Policy Guide on Agricultural Land Preservation,<sup>31</sup> the American Planning Association identified the following conditions for a viable agricultural industry:

- Agricultural land should be protected and preserved in large contiguous blocks in order to maintain a “critical mass” of farms and agricultural land. The critical mass will enable farm

support businesses to remain profitable and sustain local and regional agricultural economies.

- Agricultural land preservation must be distinguished from open space protection. The purpose of protecting agricultural land should be to protect commercially viable farms and agricultural land which incidentally provide open space.
- The preservation of agricultural land and farming is dependent on the strength of the local agricultural economy. A critical mass of agricultural support activity must be preserved to help make farming a viable business enterprise.

The *Cumberland County 2030 Growth Vision Plan: Policies and Actions* was written to help the county and its municipalities manage growth and allocate the area's finite financial resources. The support and development of agriculture is consistent with many of the vision statements, policies and actions of this plan, some of which are referenced below in Recommendations, Strategies and Actions.

A detailed analysis of the county's agricultural land was conducted for this plan to evaluate the existing and potential locations of viable farms and forests based on physical characteristics, existing and planned infrastructure, and other community factors. Map 7 displays the areas identified as most suitable for farms based on soils and current land use and Map 8, which identifies potential development cases for the areas rated as most suitable for farms. The process was repeated for loblolly and longleaf pine forestland with results displayed in Map 9 and Map 10. These maps demonstrate a process that gives agricultural lands a greater, but fair, influence in land use planning and going beyond simple statements about farmland within the larger context of rural areas. This type of planning could lead to more effective agricultural land protection.

## ***Zoning***

Zoning regulations are a tool used by local governments to implement the land-use objectives of their comprehensive plans. A zoning ordinance segments portions of the community by land use and establishes standards for development. North Carolina law prohibits counties from regulating bona fide farms through their zoning ordinances; however, lot size requirements and road specifications can impact agriculture by encouraging development and the subsequent conversion of farmland. Zoning ordinances, therefore, should at least be created carefully so as to cause no unintended impacts on agriculture.

Zoning ordinances can be used as a tool to protect farmland. Conserving large tracts of prime farmland and minimizing the density around farmland are two objectives that can greatly

benefit agriculture. There are many zoning strategies that can achieve these objectives, including: agricultural protection zoning, sliding scale zoning, conditional use zoning, cluster zoning, large-lot zoning and overlay districts.

The 2008 *Cumberland County Land Use Policies Plan* was written to provide guidance for local governing bodies in making land use decisions at the parcel level. The plan contains the following section on agricultural land use:

Agricultural land use, in a broad context, is considered to be a resource that is threatened by urban encroachment. The Zoning and Subdivision Ordinances of each of the local jurisdictions address agricultural land use through specific zoning districts and allowing certain uses within those districts. The Land Use Policies Plan contains location criteria, which provide a method of finding general locations suited for agricultural land use.

### **Objectives**

- Promote the preservation of farmland areas
- Preserve the rural character of the county
- Protect farming and farming operations from urban encroachment

### **Definition**

Agriculture is defined as land actively being used for farming and forestry purposes. The zoning district classifications for this type of land use are: A1 and A1A Agricultural Districts, although agriculture or rural farm use is allowed in all of the residential zoning districts and planned commercial and planned industrial districts.

### **Location Criteria**

- Should be outside Sewer Service Area, but if inside it must be a bona fide farm
- Existing farm or agricultural operation
- Should meet criteria for Voluntary Agricultural District designation

### ***Agricultural and Business Education***

N.C. Cooperative Extension provides farmers and agribusinesses with the research-based knowledge they need to continue producing a stable, safe and affordable food supply in economically and environmentally sustainable ways. The Cumberland County Extension Center employs three agricultural agents: one who covers commercial horticulture, bee keeping and the farmers market; one who covers urban horticulture and the Master Gardener program;

and one who covers crops and forestry. A fourth agent covers poultry in Cumberland and surrounding counties.

Small business owners and aspiring entrepreneurs can obtain in-depth counseling and other business assistance from three area resources. The Small Business Center at Fayetteville Technical Community College offers free counseling, seminars and workshops, the N.C. Rural Entrepreneurship Through Action Learning program and a business resource library. The Cape Fear Small Business and Technology Development Center located at Fayetteville State University is an inter-institutional program operated in partnership with the Small Business Administration. It offers free counseling and assistance with issues such as business planning, feasibility assessments, loan sources, marketing, operations and human resource management. Sandhills SCORE provides counseling and seminars from volunteer businessmen and women. The experienced volunteers at Sandhills SCORE assist entrepreneurs with business start-up and operations.

### ***Conservation Assistance and Cost Share***

The Cumberland County Soil and Water Conservation District (SWCD) offers free technical assistance to landowners in the county with land management, drainage, wetlands, soils information, best management practices and other land resource problems. District staff conduct educational outreach programs and offer two grain drills for rent, which is a service that reduces soil erosion while saving farmers the expense of purchasing a costly, but rarely used, piece of equipment.

There are numerous programs available to landowners that provide cost-share or financial assistance to implement land-use practices that will improve the condition of agricultural land. Practices range from livestock fencing along a stream to the conversion of cropland and pastures into permanent cover including trees and wildlife cover. Many of these programs can be especially useful in restoring longleaf pine forests. The programs are mostly administered by the SWCD, the USDA Farm Service Agency (FSA), USDA Natural Resource Conservation Service (NRCS), and the N.C. Division of Forest Resources (DFR).

- N.C. Agricultural Cost Share (SWCD)
- Forest Stewardship Plan Program (DFR)
- Southern Pine Beetle Prevention Program (DFR)
- Conservation Reserve Program (FSA)
- Conservation Reserve Enhancement Program (FSA)
- Environmental Quality Incentives Program (NRCS)

- Wildlife Habitat Incentive Program (NRCS)

### ***North Carolina Sandhills Safe Harbor Program***

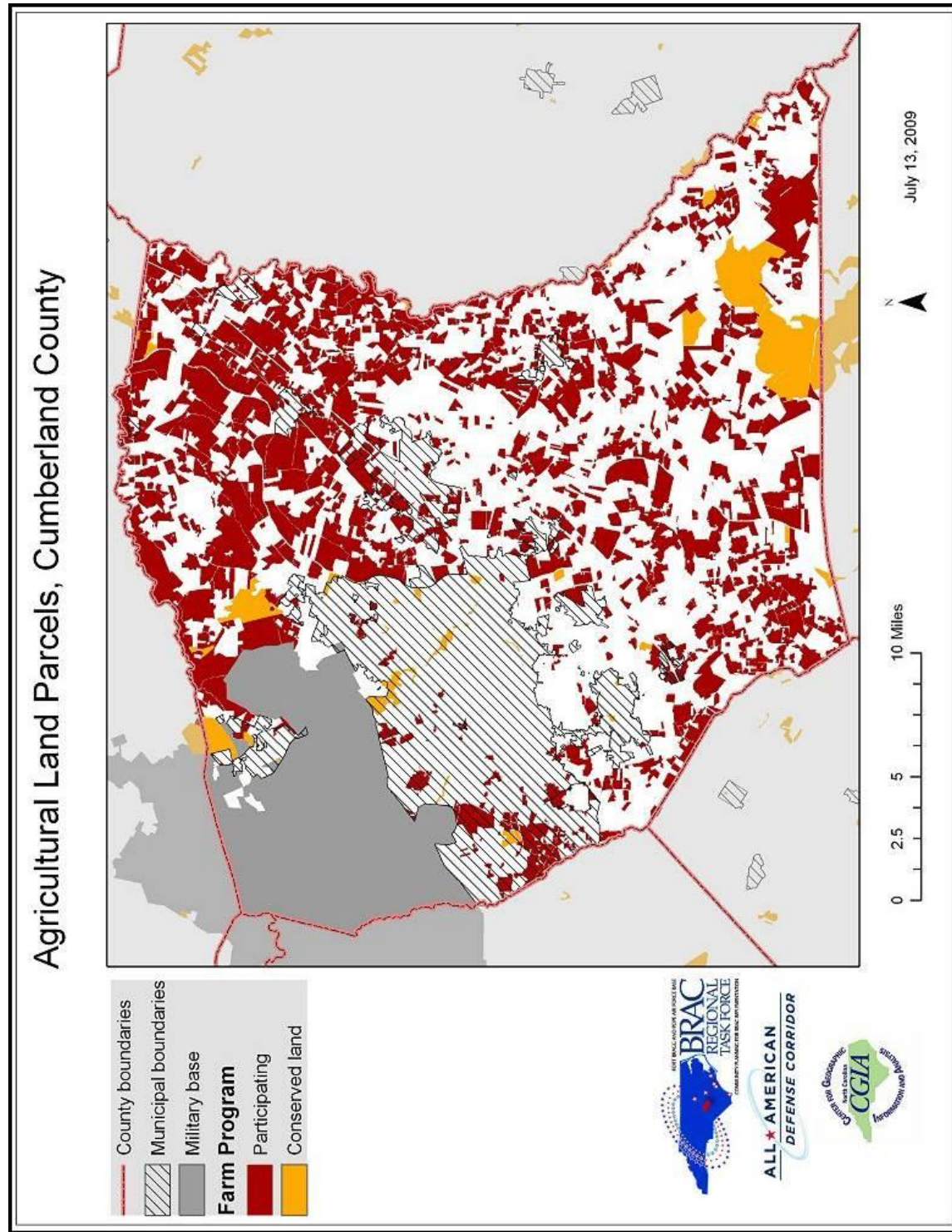
The safe harbor program is a landowner incentive program developed by the U.S. Fish and Wildlife Service under the Endangered Species Act to benefit red-cockaded woodpeckers. When red-cockaded woodpeckers inhabit a property, some land-use restrictions apply under the Endangered Species Act, so many landowners fear that their land management actions may result in the use of their property by the birds. The safe harbor program provides protection to landowners that no additional land-use restrictions will be imposed as a result of their management actions. Many activities are compatible with the program, including timber production, pine needle raking, hunting and other recreation. Enrollment in the program is required and can be done so through the U.S. Fish and Wildlife Service's office in Southern Pines.

### ***Readiness and Environmental Protection Initiative***

The Readiness and Environmental Protection Initiative is a land conservation program funded by the U.S. Department of Defense. The program is coordinated at Fort Bragg and utilizes partnerships with The Nature Conservancy and the Sandhills Area Land Trust. The conservation partners receive funds from Fort Bragg to purchase land or conservation easements on lands that are threatened by incompatible uses such as development.

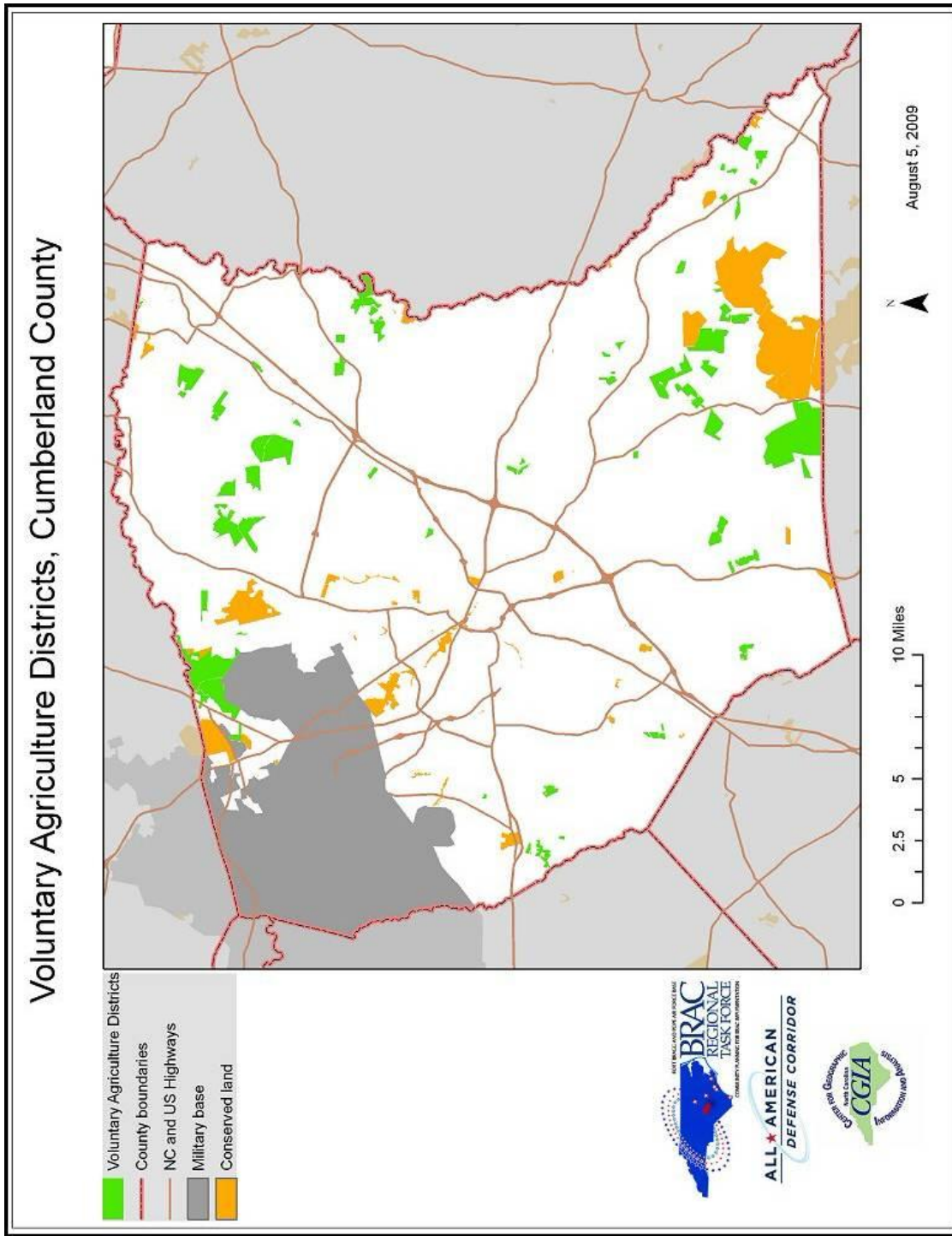
### ***Producer Opinions of County Programs***

Several questions in the producers' survey asked about the awareness, participation and importance of agriculture support programs. Responding producers clearly find the programs that provide financial and legal support to be important as shown in Figure 16. However, when it comes to their perception of the support that the county actually provides to agriculture, 40 percent or more of the surveyed producers find the county to be unsupportive in most cases indicating a need to improve these programs and/or educate producers about them.



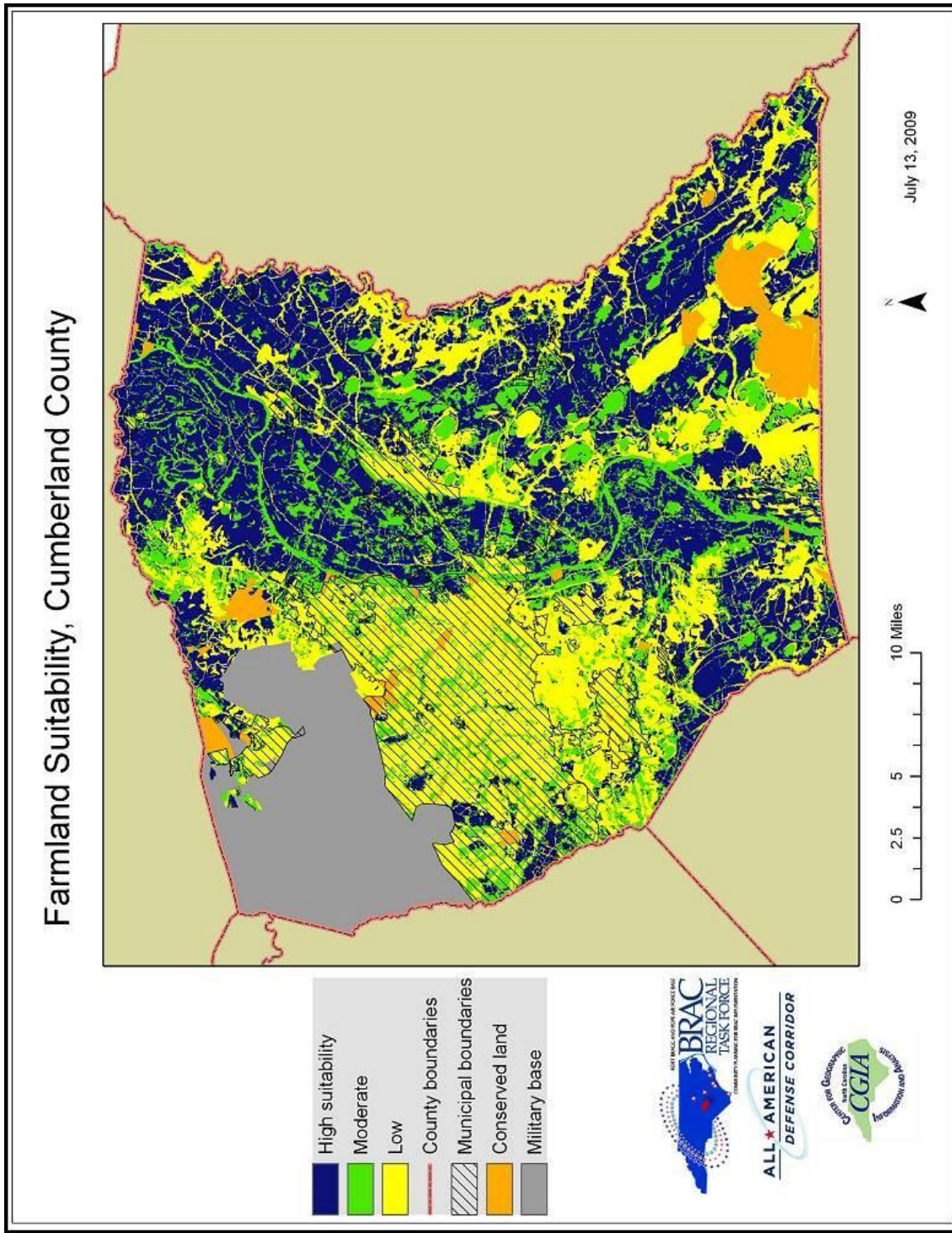
Map 5. Parcels in Present-Use Value



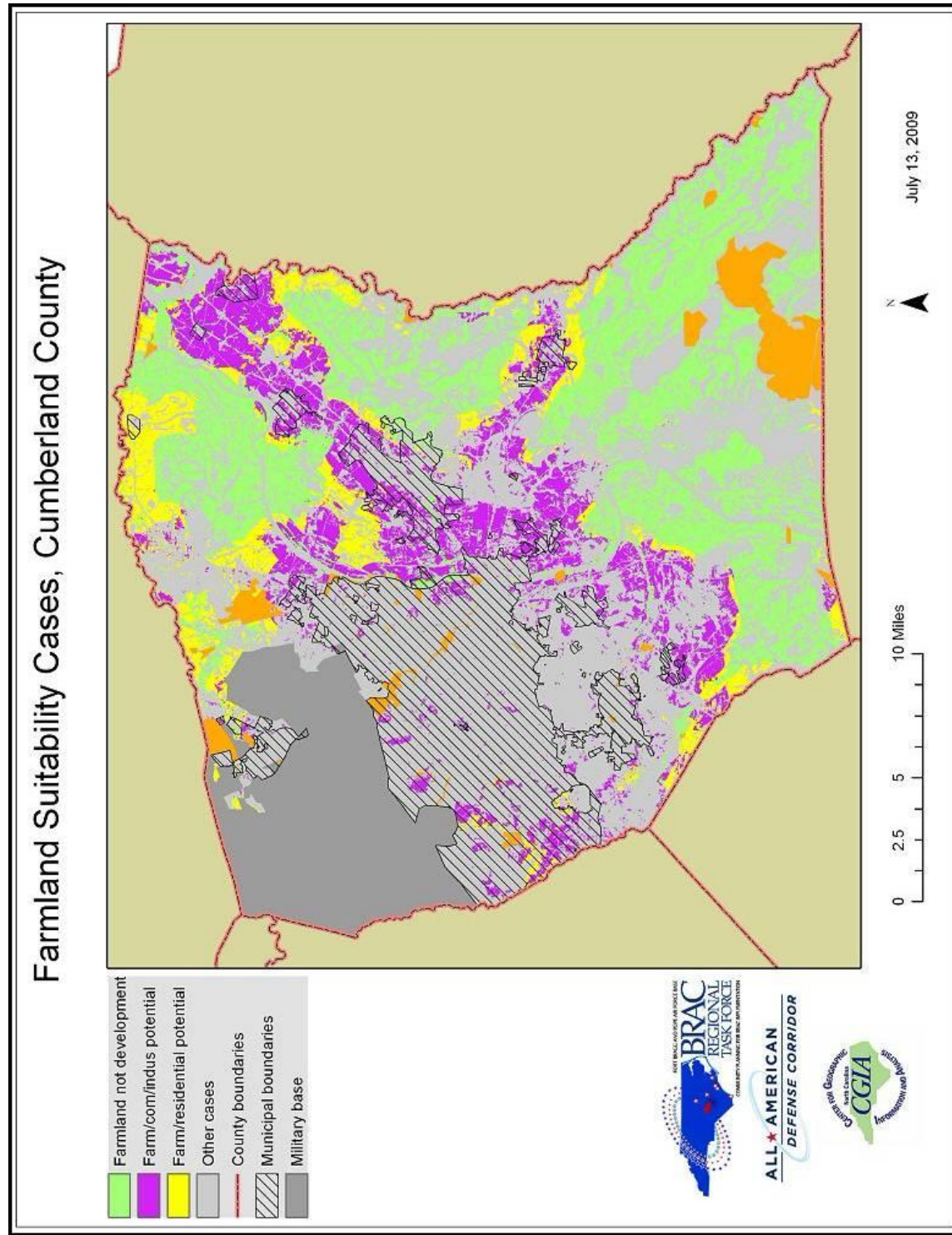


Map 6. Voluntary Agricultural Districts



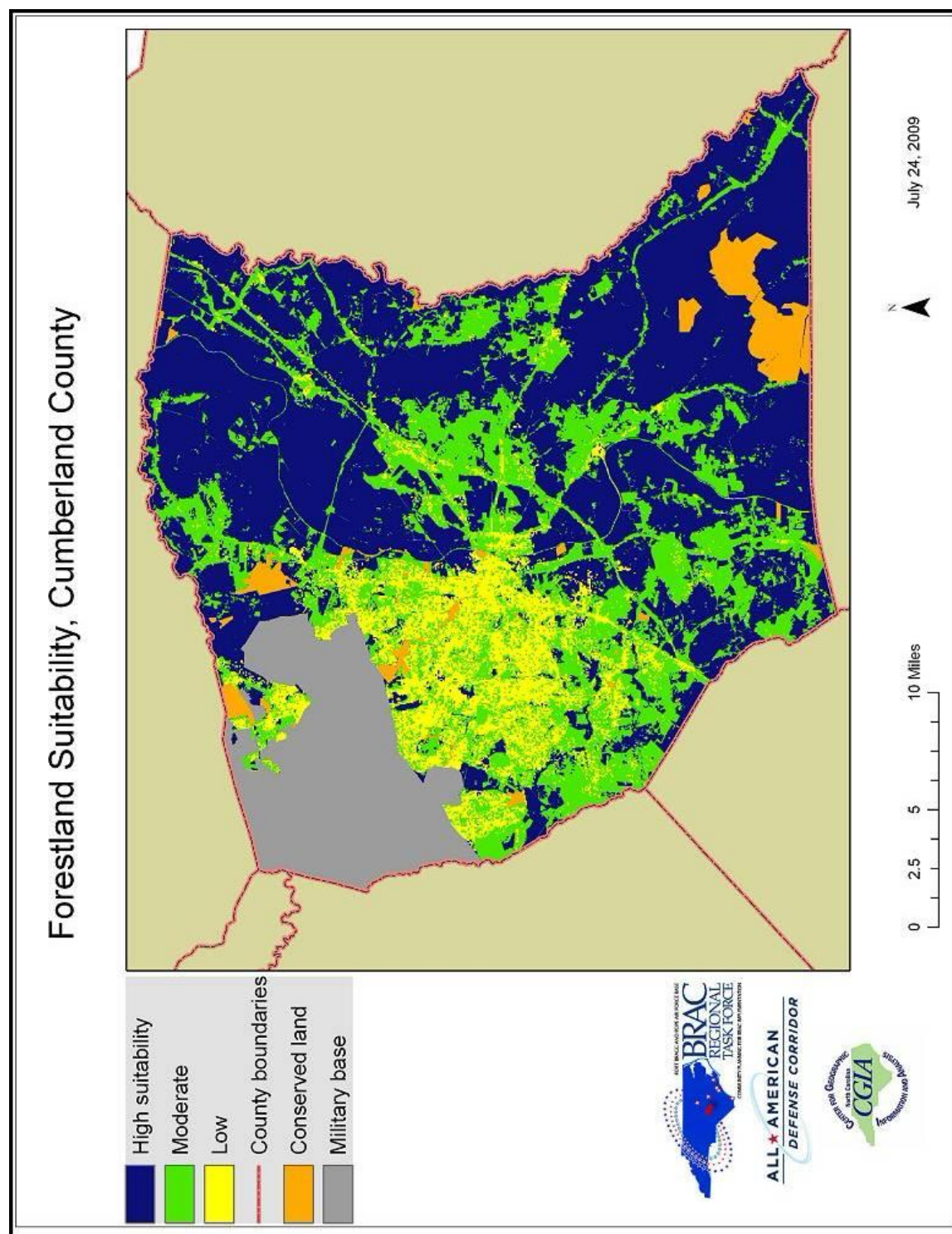


Map 7. Farmland Suitability

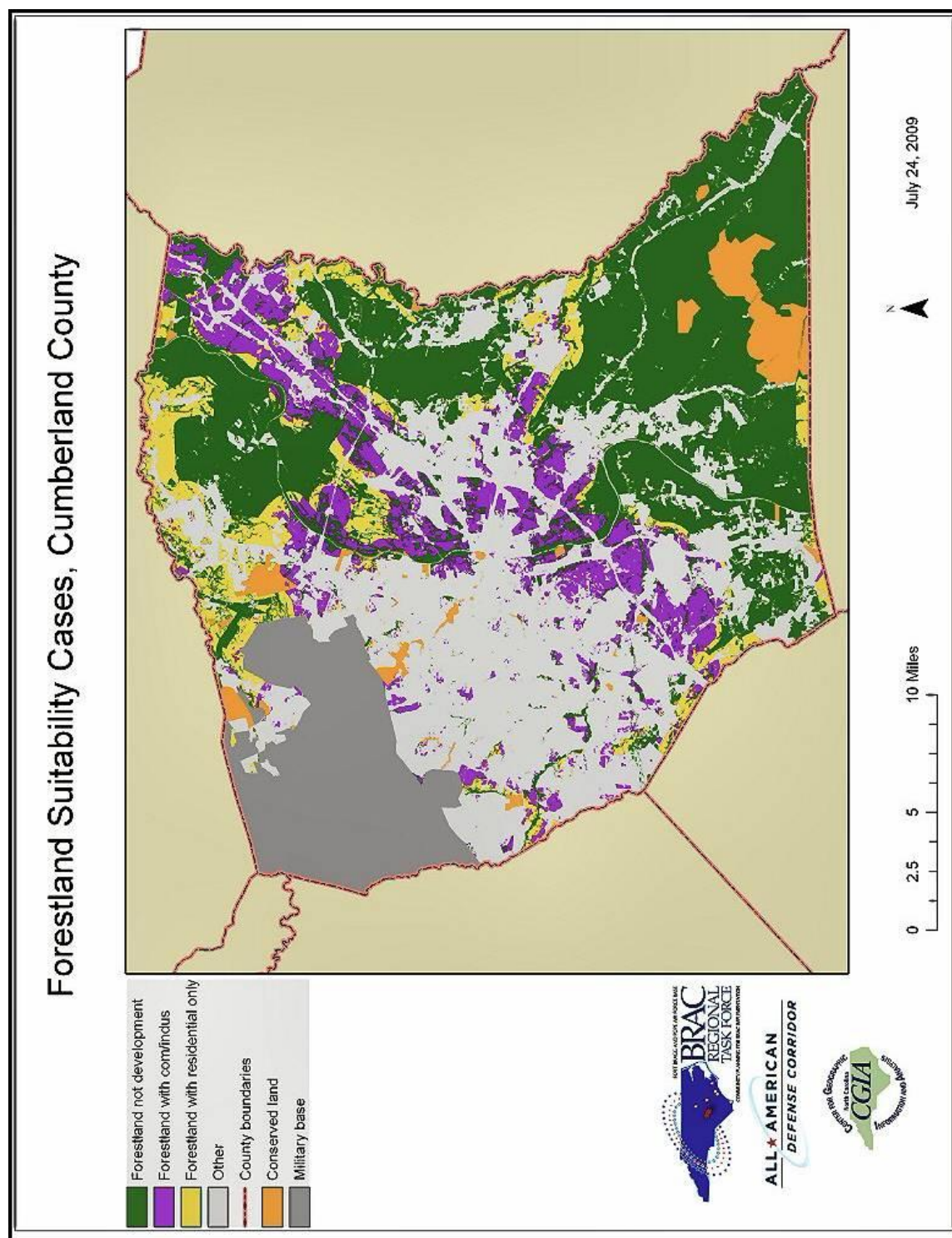


Map 8. Farm Suitability Cases

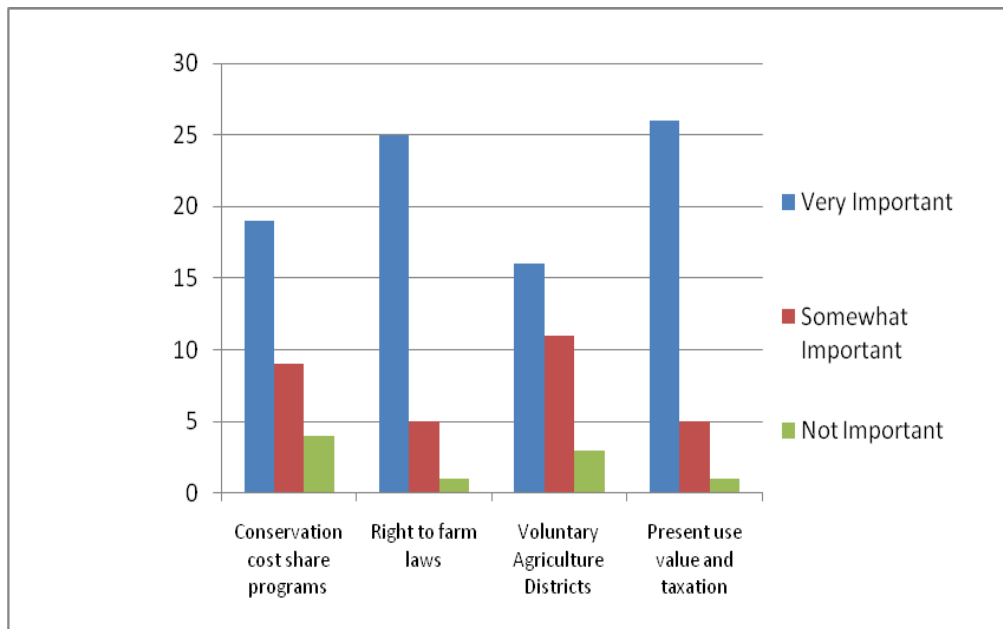




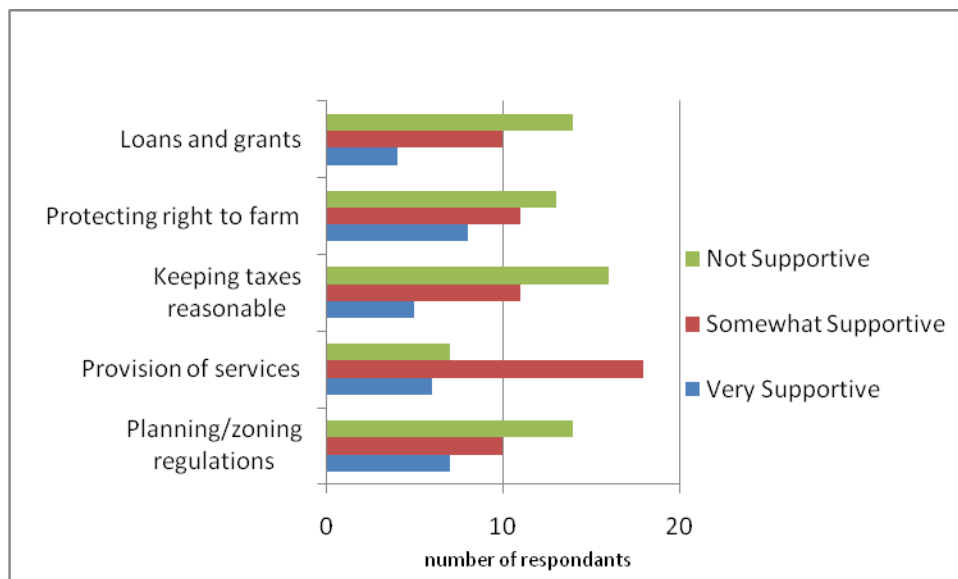
Map 9. Forestland Suitability



Map 10. Forestland Suitability Cases



**Figure 16. Cumberland County Producers Survey: Government Support Systems**



**Figure 17. Cumberland County Producers Survey: Local Government Support**

## Other Farmland Protection Tools

### *Enhanced Voluntary Agricultural Districts*

Established by N.C.G.S §§ 106-743.1 to .5, an Enhanced Voluntary Agricultural District is a Voluntary Agricultural District formed of one or more farms that are subject to an IRREVOCABLE 10-year agreement to limit development. In return for the condition of irrevocability the landowner receives the added benefits of being able to receive 25 percent of gross revenue from the sale of nonfarm products and still qualify as a bona fide farm, and being eligible to receive up to 90 percent cost-share assistance from the N.C. Agricultural Cost Share Program.

### *Agricultural Conservation Easements*

An agricultural conservation easement is a written agreement between a landowner and a qualified conservation organization or public agency under which the landowner agrees to keep the land available for agriculture and to restrict subdivision, non-farm development and other uses that are incompatible with commercial agriculture. The agreement is recorded by deed with the County Registrar and runs with the title of the land, protecting the farm in perpetuity. Placing a conservation easement over a property is a legal process with financial consequences. As a result, cash payments between \$20,000 and \$40,000 are typically needed to complete the transaction. The landowner can be compensated for the loss in value resulting from the removal of the property rights. The landowner can usually receive state and federal income tax benefits and/or a cash payment.

Soil and Water Conservation Districts have the authority to hold conservation easements. The N.C. Division of Soil and Water Conservation has been working with partners to provide technical support to districts developing easement programs. Funding to purchase agricultural easements is scarce, but sources include:

- N.C. Agricultural Development and Farmland Preservation Trust Fund
- N.C. Clean Water Management Trust Fund
- U.S. Farm and Ranch Land Protection Program.

### *Agricultural Conservation Agreements*

An agricultural conservation agreement is similar to a conservation easement but applies for a finite period of time agreed to by the landowner and conservation partner. The N.C. Agricultural Development and Farmland Preservation Trust Fund awards grants for the purchase of conservation agreements.

### ***Transfer of Development Rights***

The transfer of development rights (TDR) programs enable the transfer of development rights or density allowances from one parcel to another, usually in different areas of a county. These programs are typically established in the zoning ordinance and can be designed to meet the specific needs and interests of the community. To protect agricultural land, TDR reallocates development rights to designated growth zones. A TDR can be mandatory or voluntary. In a mandatory program the agricultural area is down zoned, and the landowners are compensated with density credits that can be sold on a market. The density credits can be bought and used to increase the development potential of a parcel inside the growth zone. In a voluntary program a landowner in the agricultural area can sell a conservation easement, and the buyer will receive density credits for the growth zone. The legality of TDR in North Carolina is questionable, and a county might need to receive authorization from the General Assembly prior to implementation. A TDR might be most successful for a county if it is designed in partnership with a municipality, in which case authorization from the General Assembly is required. There are no existing TDR programs in North Carolina at this time.

## **Opportunities for Economic Development**

### ***Agricultural Biotechnology***

Residents of Cumberland County surveyed for this plan were asked if agriculture is a high technology industry, and 70 percent said “yes”. Growing food, fiber and timber has always been more complex than is seen through casual observance, but the future offers new, unprecedented opportunities.

In December of 2009, the North Carolina Biotechnology Center, located in Oxford N.C., launched the Ag/Bio Initiative to grow the state’s agricultural economy by \$30 billion by 2020. The center and its partners plan to achieve this growth by combining North Carolina’s traditional agriculture and new technology strengths, and focusing attention on agricultural biotechnology. “Biotechnology is a broad collection of tools and technologies that use living cells and/or biological molecules to solve problems and make products.”<sup>32</sup>

Biotechnology is used in agriculture to enhance crop protection and yield, make tools to improve agriculture and to find new uses for existing crops. Herbicide resistant varieties of soybeans, corn and cotton are three examples of crop enhancement developed from biotechnology. Animal vaccines, growth hormones and feed additives are just a few tools developed to improve agriculture. Traditional crops such as soybeans and corn (or their new varieties) can be used as starting materials for products with uses in fuel, industrial chemicals, and pharmaceutical intermediates.

The Ag/Bio Initiative signals the opportunity for agriculture in North Carolina to become increasingly valuable and include traditional farmers, scientists, entrepreneurs and the myriad professionals and service providers needed for their success. The Biotechnology Center provides an array of services and programs that will contribute to the success of the initiative, including business assistance and loans. Partners in the initiative represent several commodities that are grown in Cumberland County: Golden LEAF Foundation, N.C. Forestry Association, N.C. Soybean Producers Association and the Tobacco Trust Fund Commission.

### ***Biofuels***

In 2006, the N.C. General Assembly mandated a statewide strategic plan for biofuels and appropriated \$5 million in 2007 to fund the Biofuels Center of North Carolina. The strategic plan was completed in 2007 and established the goal: “To develop a liquid biofuels industry that is substantial in output, agriculturally and economically important, sustainable, and significant across the state.” The first strategy establishes a vision where 10 percent of liquid fuels sold in North Carolina in 2017 will come from biofuels grown and produced within the State.

**Source: Fueling North Carolina’s Future: North Carolina’s Strategic Plan for Biofuels Leadership (2007)**

### ***Local Markets***

The U.S. food system is structured around supply chains that move undifferentiated products to markets with speed and efficiency. The fact that fruit, vegetable and livestock products are cheap, uniform and available year-round is a remarkable feat of agricultural industrialism. Large grocery retailers, including nonfood store retailers like Wal-Mart, have been increasingly utilizing supply-chain management, marketing and trade promotion practices that all but eliminate the need for small farms as suppliers. Fresh fruits and vegetables are procured from large grower-shippers that own farms or contract with farms in multiple regions so that they can provide the consistent supply of products to retailers year round. Consumers benefit from the low prices this system affords.

However, in order to withstand the rigors of transportation and meet the demands of retailers, many fresh food products lack the taste and texture qualities of products once grown locally for immediate consumption. Furthermore, the system has fundamentally broken the connection between consumers and farmers. Even when locally grown products are on the shelf, they are undifferentiated in character and are mixed with like products from other regions. These two consequences present an opportunity for Cumberland County farmers.



Developing new products for local markets is an opportunity for many of the county's small farms and is one that surveyed producers identified as very important. (Figure 18)

*Local* is an attribute of food that is increasingly being valued by consumers around the country.<sup>33</sup> The real and perceived characteristics of local food products consumers desire are varied. Tangible characteristics include quality, freshness, taste and texture. Intangible characteristics include supporting local economies, family farms and the environment. Discriminating consumers are not limited to those eating organic produce, but are shoppers who want pasture-raised beef, pork, poultry and eggs. Many accept that sustainable practices can include the use of synthetic fertilizers and pesticides. Figure 18 shows the estimated expenditures of Cumberland County households on food for home consumption. Estimates for the south region of the United States from the 2008 Consumer Expenditure Survey<sup>34</sup> were extrapolated using the number of households estimated by the 2008 Community Survey.<sup>22</sup> In addition to the \$180 million spent on meat and livestock products and fresh fruits and vegetables for home consumption, Cumberland County households spent \$234 million in restaurants in 2008.<sup>22,35</sup> There are multiple opportunities for Cumberland County's small farms to sell directly and indirectly to local consumers.

Surveyed producers think direct marketing and educating consumers about buying local are very important. (Figure 18) Direct market channels include farmers markets, which provide a link between urban residents and rural producers; community supported agriculture (CSA), a subscription service in which the farmer sells shares of the farm's weekly yield to customers for a fixed price; roadside stands; and on-farm stores. Direct sales can quadruple the revenue a farmer earns compared to sales to an intermediary.

One study<sup>36</sup> estimated that for every dollar spent on food in retail outlets only 20 cents was received by the farmer. The farm value shares for fresh fruits and vegetables were estimated to be 23.5 percent and 26.5 percent, respectively. Fort Bragg by itself offers an opportunity for direct sales. The availability of fresh produce is limited to soldiers and their families, a problem that could be addressed with the establishment of one or more tailgate markets near the post's gates.<sup>37</sup>

Indirect market channels include food retailers from neighborhood food cooperatives to warehouse club stores, restaurants and institutions such as schools, colleges and hospitals. Scaling up to these markets is more appropriate for the occupation family farms with sales between \$100,000 and \$250,000 as well as large family farms.

The substantial amount of time needed to sell at a farmers market or coordinate the logistics of a CSA and the larger volume of products from these farms limit direct sales to a supplementary

role at most. However, these farms have an advantage over the very large farms in producing differentiated products. Their scale enables them to be flexible and respond to changes in the demand of highly diversified markets.

The food service industry is a primary example of these markets. Chefs at independent restaurants seek products to keep their food unique and institutions such as hospitals and schools are looking for ways to improve human health and reduce obesity. As demand for local products increases, the supply-chain driven outlets will likely sell these products too, which further increase this opportunity for local farmers.

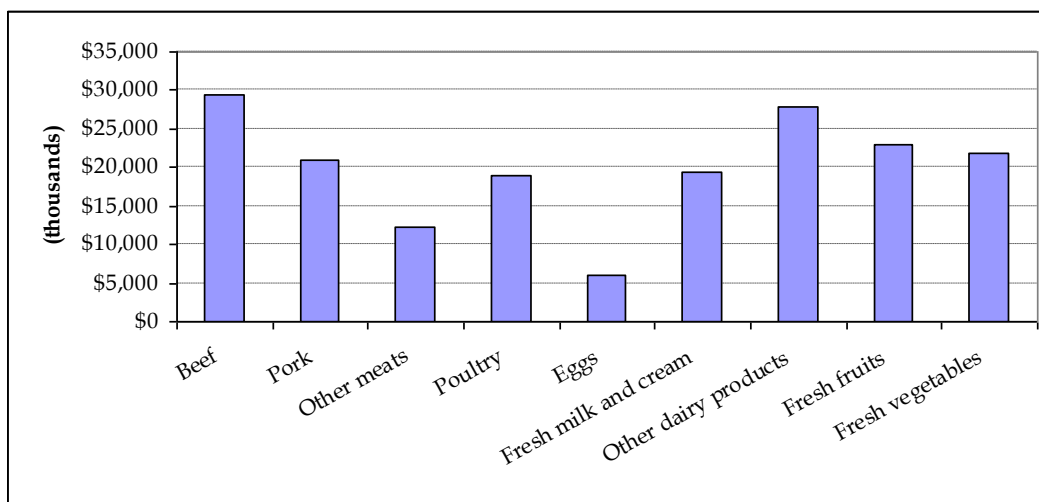
### ***Feed the Forces***

Early attempts to sell produce and other agricultural products to Fort Bragg were met with barriers imposed by the procurement procedures of the base's commissaries. Although Public Law 95-07 requires that all federal procurement agencies provide contract opportunities to small and disadvantaged businesses, the system at Fort Bragg is simply too large for small-scale producers to participate. An economic impact report produced for BRAC Regional Task Force<sup>37</sup> asserts that the 11 counties in the Fort Bragg region combined could not supply all the food consumed at the post. The report suggests that farmers in the region need to collaborate and submit a single unified bid for a sub-contract with the Fort Bragg commissaries. Additional limitations include security issues limiting access to the base, the necessity for producers to acquire GAP certification, lack of knowledge and training of farmers to acquire federal contracts, and most importantly the base command's apparent disinterest in working with local farmers and producers to overcome these and other limitations.

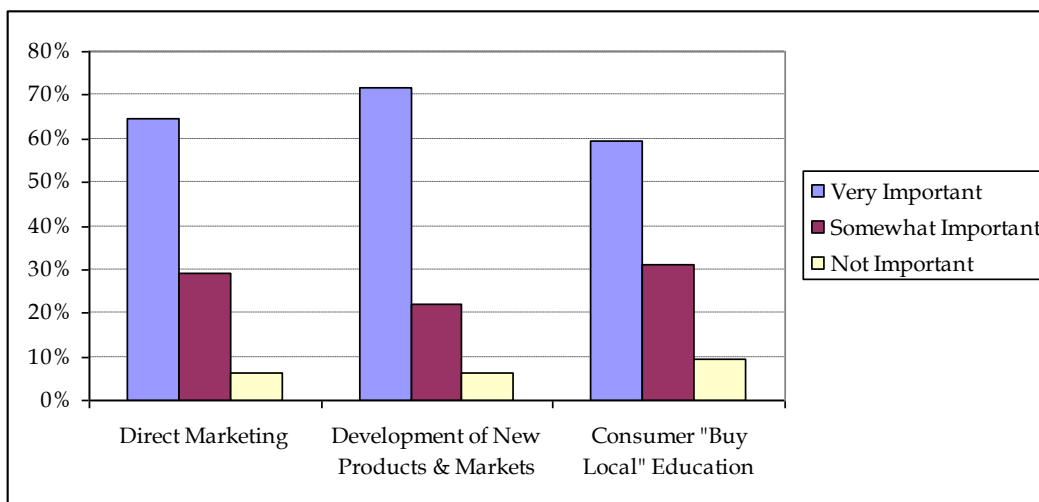
Population growth provides an opportunity as well as a challenge for agriculture. Local markets are not limited to food products. As the population of the county increases, new residential and commercial developments will be built, and they will need landscaping. This presents an opportunity for Cumberland County farmers growing ornamental trees, shrubs, turf sod and pine straw as well as greenhouses growing floriculture crops and bedding plants. Locally grown ornamentals have some of the same potential benefits as those of local food products.

Having been selected and started in the county, the woody and herbaceous plants will be more adapted to the soils and climate of the area compared to plants from other regions. They also carry the intangible characteristics of supporting local farms and the local economy, qualities a savvy developer can use to market its homes. The pine straw market represents an opportunity for landowners to manage their timber for longleaf pine. This provides additional income from pine straw raking until the timber is ready for harvest.

Finally, new development and home restoration might present an opportunity to the forest products sector. Home buyers are seeking sustainability attributes. Builders seeking LEED (Leadership in Energy and Environmental Design) certification receive credits for using regionally sourced materials.<sup>38</sup> Since much of the timber grown in the county is used to make framing and other lumber products, residential expansion and the trend towards green building offer the potential for local forest owners, loggers and saw mills to experience higher demand and prices for their products and services.



**Figure 18. Expenditures on Select Foods for Home Consumption in Cumberland County**



**Figure 19. Cumberland County Producers Survey: Local Marketing**

# Recommendations, Strategies and Actions

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## **Recommendation 1**

### **Promote expansion and diversification of the agricultural industry.**

Cumberland County's 2030 Growth Vision Statement #1 describes the county's economic base as having grown and diversified. The policies developed to achieve this vision address the expansion of existing businesses and the start up of new businesses, the active participation of local governments in the creation of business development, agri-tourism as a means to sustain family farms, the need for area educational institutions to focus training and retraining students for the 21<sup>st</sup> Century economy, the protection of business location sites, opportunities to link Cumberland County to surrounding counties and research institutions, and the use of economic development incentives.

Agriculture and agribusiness contribute more than \$540 million to the county's economy each year through the production and manufacturing of crops, livestock and forest products. They provide jobs and have significant growth potential. The economic base of agriculture is an asset and resource that should be utilized to achieve the vision of a diversified economy. The strategies below will support the pursuit of the vision by promoting the expansion and retention of small, family farms, the recruitment and development of biotechnology enterprises and the development of local markets for locally grown products. A strong and sustained economic development program will help address the challenges of profitability and aging farmers.

#### ***Strategy 1.1***

Promote Cumberland County as a location for agricultural biotechnology research and product manufacturing.

#### ***Action Steps***

- Create and maintain an inventory of opportunity sites for agricultural biotechnology business development. The inventory should include farms, forest tracts and buildings suitable for research, production and manufacturing.

- Identify sources and/or establish mechanisms for funding agricultural biotechnology development incentives. Sources include the N.C. Center for Biotechnology, the Biofuels Center of North Carolina, and the N.C. Agricultural Development and Farmland Preservation Trust Fund.
- Establish a business recruiting presence in the Research Triangle Park area to attract agricultural biotechnology firms to the county.
- Encourage and support the development and expansion of biotechnology educational programs at Fayetteville State University, Fayetteville Technical Community College and Cooperative Extension. Investigate opportunities to cooperate and/or participate with the Center for BioAgriculture<sup>d</sup> at Robeson Community College.

### ***Strategy 1.2***

Support the development of a local agricultural economy

#### ***Action Steps***

- Establish a permanent Farmer's Market in Fayetteville with the infrastructure to operate year-round and in inclement weather. The market should include water and power to allow vendors to sell perishable products and be designed and constructed to provide an inviting, comfortable and convenient experience for shoppers.
- Develop a marketing program to promote products grown in the county. The program should include distribution channels such as the Farmer's Market, restaurants, retail stores, schools and other institutions. Additional users such as municipalities and developers should be targeted as users in this marketing strategy.
- Investigate funding opportunities to support the hiring of marketing specialist to implement the steps of this strategy.
- Assess the food economy in the county and identify education, infrastructure and marketing tools to increase the demand and supply of locally produced products.
- Educate and provide incentives for municipalities to utilize locally produced agricultural, ornamental and timber products.

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<sup>d</sup> The North Carolina Community College System established the Center for BioAgriculture to focus on agricultural biotechnology as part of its BioNetwork program, which connects biotechnology education programs across the state.

- Provide education and training to farmers in areas of production, business and marketing. Encourage farmer participation and enrollment in the N.C. Department of Agriculture and Consumer Services Farm Fresh, Got to Be N.C. and Goodness Grows in North Carolina marketing programs.
- Promote agri-tourism as economic opportunities for farmers and as recreation, heritage and family activities for residents.
- Develop a green building program to educate home buyers and builders about Leadership in Energy and Environmental Design (LEED) certification and promote the use of local materials. Developing links between forest owners, loggers, saw mills and builders to increase the use of local timber in new construction and remodeling of buildings.

### ***Strategy 1.3***

Promote agriculture as a career

#### ***Action Steps***

- Expand and enhance the agricultural education programs at the high schools to prepare students for the emerging sectors of agricultural biotechnology, sustainable production and high value food products.
- Work with educational institutions, Fayetteville Technical Community College and Fayetteville State University to evaluate expansion of curriculums related to food, fuel and fiber industries. Additionally, encourage the inclusion of agricultural workforce training in the BRAC Workforce Training Initiative.
- Work with Cooperative Extension and the small business centers to ensure that resources are available to meet the specific needs of agricultural entrepreneurs.
- Promote programs for young farmers to encourage the growth and development of careers in agriculture ( ex. N.C. Farm Bureau's Young Farmer and Rancher Program, N.C. State University's "SUCCEED" Tobacco Short Course).

## **Recommendation 2**

### **Manage growth and protect agricultural lands.**

Cumberland County's 2030 Growth Vision Statement #2 states that the local governments and service providers have coordinated their policies and actions to direct growth where it can best be served, resulting in fewer land-use conflicts and less sprawl. Vision Statement #7 states that the loss of farmland has been curtailed by growth management policies that have directed new development away from prime agricultural areas. Additionally, the Land Use Policies Plan

acknowledges that agricultural land use is a resource threatened by urban encroachment and promotes the preservation of farmland areas and farming operations.

The goal of this recommendation is to ensure that Cumberland County maintains the land resources needed to support the agriculture industry as it expands and diversifies. The fundamental objectives of this recommendation are to: 1) conserve highly productive soils or those classified by the Natural Resource Conservation Service as prime, of statewide importance and of local importance; and 2) maintain large continuous blocks of agricultural land. The strategies are designed to achieve these objectives and meet the goal of maintaining adequate land resources. Meeting the goal will address the challenges of population growth and the loss of rental land.

### ***Strategy 2.1***

Create an agricultural land protection map and policy statement

#### ***Action Steps***

- Review the 2030 Growth Strategies Map and the agricultural land analysis conducted for this plan.
- Create a series of maps that supplement the growth strategies map by showing farmland and forestland suitability ratings, and farmland and forestland suitability cases from the land-use analysis. (See maps 7 – 10).
- Evaluate the integrated maps and develop a system to identify areas within rural, community growth and urban fringe areas to be protected. Consider the following guidelines:

Growth Strategy Area	Priority	Suitability Rating	Competition for Land
Rural	High	High	All Cases
Rural	Medium	Moderate	All Cases
Rural	Low	Low	All Cases
Community Growth	High	High	Less
Community Growth	Medium	High Moderate	Residential or Industrial Less
Community Growth	Low	Moderate Low	Residential or Industrial Less
Urban Fringe	High	High	Less
Urban Fringe	Medium	Moderate	Less
Urban Fringe	Low	Low	Less

- Create a master agricultural land protection map from the results of the previous actions.
- Develop a policy statement to accompany the land protection map that explains the goals and objectives of the land protection strategy and the rationale for each of the priority groups. For example, areas in community growth and urban fringe areas were selected because: (1) Low-impact agricultural activities – those with little or no noise, odor, dust, etc. – are compatible with surrounding residential and commercial land uses. (2) Some activities, such as fruits and vegetables sold through a Community Supported Agriculture service could be profitable to farmers and desirable to neighboring residents. (3) There is a finite supply of highly productive soils and all efforts should be made to conserve them for agricultural use. (4) There may not be a need or demand to develop every site within an area so it makes sense to protect viable farm sites until they are absolutely needed for development.



## ***Strategy 2.2***

Expand the voluntary land conservation program

### ***Action Steps***

- Establish an Enhanced Voluntary Agricultural District (EVAD) program.
- Develop a conservation incentives program similar to the program in place to protect lands in the Fort Bragg buffer area that is available to all Cumberland County agricultural and forest land owners.
- Develop a conservation easement program in the Soil and Water Conservation District. Seek funding to purchase conservation easements and/or assist with transaction costs.

## ***Strategy 2.3***

Promote the long-term use of agricultural land

### ***Action Steps***

- Provide technical assistance to address issues such as land and water stewardship, documentation and record keeping for PUV, loans, Agriculture Cost Share and other programs.
- Provide estate planning and farm transition assistance. Examples include annual workshops and maintaining a directory of qualified advisors.

## ***Strategy 2.4***

Utilize land planning tools and zoning ordinances to encourage preservation of agricultural lands while allowing for development in rural areas.

### ***Action Steps***

- Submit the agricultural protection map and policy statement to the Joint Planning Board and request that it be incorporated into their current and future plans.
- Review the zoning rules that apply to each of the priority areas on the agricultural protection map. Evaluate and rate the degree to which each site, or group of sites, is protected. Create a map identifying the protection rating for each site.
- Research and evaluate potential agricultural protection zoning strategies. Develop a set of proposals to revise the zoning ordinances and strengthen agricultural land protection where deemed appropriate by landowners. Representatives from each group of stakeholders must be engaged to participate in the process including the county, municipalities and landowners.

- Submit the proposals to the appropriate staff, Farm Advisory Board and officials to be advanced in the planning and adoption process.

### **Recommendation 3**

#### **Increase the agricultural community's participation in government activities.**

Cumberland County's 2030 Growth Vision Statement #17 states that citizens show a keen interest in local government affairs and that their civic pride is revealed through broad community involvement. Additionally, local government officials routinely seek the views of the citizens on growth and development issues. During the review process emphasis is placed on effective communication and consensus among all parties including local advisory boards and the public.

This recommendation addresses the challenge of apathy in the agricultural community and seeks to increase its influence in county affairs. The strategies and actions will also serve to educate other interest groups about the agriculture industry and its value to the county. Agriculture is currently represented by the Farm Advisory Board and one member on the Equalization and Review Board. The Farm Advisory Board has only two direct duties: 1) approve or deny applications to the Voluntary Agriculture District Program, and 2) make recommendations to the Joint Planning Board and Board of Commissioners regarding issues involving farmland. There other issues besides farmland that affect agriculture and are influenced by other advisory boards. The Farm Advisory Board and the agricultural community in general need to have greater involvement in the processes that determine the use of Cumberland County's resources.

#### ***Strategy 3.1***

Increase the duties and involvement of the Farm Advisory Board

#### ***Action Steps***

- Recommendations regarding all issues involving agriculture will be reviewed by the county-appointed Farm Advisory Board.
- Develop formal procedures for county agencies and departments to provide information to the Farm Advisory Board regarding hearings and discussions relevant to agriculture. The procedures will provide ample time for the Farm Advisory Board to gather and evaluate information regarding the issue at hand and formulate a recommendation or statement.

- Provide the Farm Advisory Board with the resources needed to adequately represent the agricultural community and fulfill their duties. These resources include county staff, officials and contractors each made available to the board to provide information regarding the issues being evaluated.

### ***Strategy 3.2***

Increase the participation in community affairs by members of the agricultural community.

#### ***Action Steps***

- Communicate public hearing announcements and other important information to enrolled members of the VAD and participants in the Present Use Value (PUV) program.
- Recruit members of the agricultural community to serve on the many advisory boards that directly or indirectly impact agriculture ( examples: Cooperative Extension Advisory Board, Planning Board, Farm Advisory Board, Soil and Water Board, FSA Committee, Farm Credit Board, County Commissioner and others).

## **Recommendation 4**

### **Promote widespread support for agriculture.**

This recommendation addresses the challenges of conflicts with non-farm neighbors and negative public opinions toward the industry. The strategies and actions will also contribute to the success of other strategies by increasing demand for locally grown products, informing owners of idle farmland about leasing opportunities and stimulating interest among the youth in the field of agriculture.

### ***Strategy 4.1***

Publicize this plan and the county's commitment to agriculture

#### ***Action Steps***

- Make presentations to county advisory boards, municipalities and other key organizations to encourage understanding of the importance of agriculture and the need for preservation.
- Invite *The Fayetteville Observer* and *City View* to write stories about the plan.
- Produce a segment for *Cumberland Matters* for broadcast on community access television.
- Create a page for agriculture on the Fayetteville Portal (<http://www.fayettevillenc.net/links.htm> )

## ***Strategy 4.2***

Provide ongoing education and information to the public about agricultural issues

### ***Action Steps***

- Notify the *Fayetteville Observer* and other media sources of upcoming agricultural events and agricultural issues of interest.
- Produce a regular segment for *Cumberland Matters*.
- Make regular presentations to civic groups and organizations about the agricultural industry and community.

## ***Strategy 4.3***

Develop a program in the schools to teach children about agriculture.

### **Program Elements & Topics:**

- Support the use and development of print, video and digital media (example: Farm Bureau's Ag in The Classroom; NCDA&CS Ag's Cool; etc.).
- Guest speakers including agricultural producers and agribusiness owners
- Farm tours
- The food, fuel and fiber systems – transportation, fresh versus processed
- Production: how food, fiber and timber are grown
- Agricultural lands: characteristics, public benefits, loss and protection

# Implementation

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## Review and Adoption

- The county team or its representatives will submit the plan to the Board of Commissioners for their consideration and endorsement.
- The county will submit the plan to the N.C. Commissioner of Agriculture for certification.

## Stakeholders and Work Plans

Each strategy and action identified as a short-term objective will have a different set of stakeholders and constraints. Therefore, each will be addressed independently by the agriculture protection director following these steps:

- Determine the stakeholders needed for implementation. Include one or more members of the Farm Advisory Board or a designee from the agricultural community.
- Hold a meeting with representatives from each stakeholder group to assess operational feasibility and resource needs.
- Develop a work plan with stakeholders identifying objectives, tasks, responsibilities and a timeline.

## Annual Review

Each year the Farm Advisory Board or its representatives will review the plan and its implementation and:

- Evaluate the success and impact of ongoing efforts.
- Update the recommendations, strategies and actions either by modification, addition or removal.
- Revise the set of two-year objectives.

The county team will prepare a report for the Board of Commissioners that includes a summary of the efforts of the program and recommendations for the coming two years.

## **Five-Year Review**

Every five years the plan will be reviewed for accuracy, updated and evaluated for performance. Specifically, the review will include:

- Updating and analyzing the land, farm and economic information in Section IV.
- Identifying the current challenges to agriculture. Evaluating the progress being made towards ongoing challenges
- Assessing the state of the agricultural industry in the county and the efforts being made to protect and develop it

## **Funding**

Funding the implementation of this plan will be significant and ongoing. To maximize the county's ability to match and receive external funds, a commitment through appropriation of in-kind or monetary resources should be pursued. Potential opportunities for funding sources include:

- Rollback taxes collected each year from properties leaving the Present-Use Value program
- N.C. Agricultural Development & Farmland Preservation Trust Fund
- N.C. Tobacco Trust Fund
- U.S. Department of Agriculture, Rural Development
- Southern Region Sustainable Agriculture Research and Education
- N.C. Market Ready
- Golden LEAF

**Table 2. Implementation Timeline**

Recommendation 1.

Promote the expansion and diversification of the agricultural industry.

Year that action is first implemented.	1st Year	2nd Year	3rd Year	4th Year	5th Year
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Strategy 1.1. Promote Cumberland County as a location for agricultural biotechnology research & production

Site inventory			<input type="checkbox"/>		
Funding sources			<input type="checkbox"/>		
Recruiting presence				<input type="checkbox"/>	
Education program					<input type="checkbox"/>

Strategy 1.2. Support the development of a local food system

Farmers Market	<input type="checkbox"/>				
Marketing program	<input type="checkbox"/>				
Marketing specialist					<input type="checkbox"/>
Local food economy assessment		<input type="checkbox"/>			
County & municipal product use		<input type="checkbox"/>			
NCDA marketing programs		<input type="checkbox"/>			
Agri-tourism			<input type="checkbox"/>		
Developers and Green building program				✓	

Strategy 1.3. Promote agriculture as a career

High school programs				<input type="checkbox"/>	
Fayetteville Tech. CC programs				<input type="checkbox"/>	
Small business services				<input type="checkbox"/>	

## Recommendation 2.

### Manage growth and protect agricultural lands.

Year that action is first implemented.	1st Year	2nd Year	3rd Year	4th Year	5th Year
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#### Strategy 2.1. Create an agricultural land protection map and policy statement

Create supplemental maps	<input type="checkbox"/>				
Identify protection areas	<input type="checkbox"/>				
Create master land protection map		<input type="checkbox"/>			
Develop a land protection policy statement		<input type="checkbox"/>			

#### Strategy 2.2. Expand the voluntary land conservation program

Enhanced VAD				✓	
Conservation incentives program		<input type="checkbox"/>			
Conservation easement program			<input type="checkbox"/>		

#### Strategy 2.3. Promote the long-term use of agricultural land

Estate planning & farm transition		✓			
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#### Strategy 2.4. Utilize land planning tools and zoning ordinances to direct development away from agricultural lands

Submit ag. protection map & policy statement to the Joint Planning Board			<input type="checkbox"/>		
Review zoning rules			<input type="checkbox"/>		
Develop & submit proposals				<input type="checkbox"/>	



### Recommendation 3.

Increase the agricultural community's participation in government activities.

Year that action is first implemented.	1st Year	2nd Year	3rd Year	4th Year	5th Year
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#### Strategy 3.1. Increase the duties & involvement of the Farm Advisory Board

Seek recommendations	<input type="checkbox"/>				
Formalize information sharing procedures		<input type="checkbox"/>			
Provide resources to Farm Advisory Board	<input type="checkbox"/>				

#### Strategy 3.2. Increase the participation in community affairs by members of the agricultural community

Communicate public hearings, etc.	<input type="checkbox"/>				
Recruit members for advisory boards	<input type="checkbox"/>				

### Recommendation 4.

Promote widespread support for agriculture.

Year that action is first implemented.	1st Year	2nd Year	3rd Year	4th Year	5th Year
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#### Strategy 4.1. Publicize this plan and the County's commitment to agriculture

Presentations	<input type="checkbox"/>				
Print media	<input type="checkbox"/>				
Community television	<input type="checkbox"/>				
Fayetteville Portal		<input type="checkbox"/>			

#### Strategy 4.2 Provide ongoing education & information to the public about agricultural issues

Media relations & presentations		<input type="checkbox"/>			
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#### Strategy 4.3 Develop a program in the schools to teach children about agriculture

Guest speakers, farm tours, etc.					<input type="checkbox"/>
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